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Meaning of Interpersonal Interaction and Content Mastery in Online Adult Education

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Abstract

Working adult students may have difficulty mastering complex concepts when taking courses online. Researchers have argued there is a need for in-person, peer-teacher interaction available in traditional classrooms that is lacking online. The purpose of this dual-focus phenomenological study was to explore the meaning of purposeful interpersonal interaction and the experience of content mastery among undergraduate working students taking online psychology courses. Constructivism and adult learning theory guided the study. Semi-structured interviews were conducted with 10 working adults with experience taking online psychology courses within the last 2 years. Data were analyzed using Moustakas's guidelines. Results indicated that participants experienced interpersonal interaction and content mastery of complex course concepts when provided with clear course design and expectations, instructor-peer interactions, and detailed instructions. Findings may lead to positive social change by informing and improving the learning experience for working adults taking online courses.

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Table of Contents

List of Tables

Chapter 1: Introduction to the Study

Recent research findings have been mixed regarding academic achievement for college students taking online courses versus traditional classrooms (Alqurashi, 2018; Nguyen, 2015). Many researchers have argued that there is a need for the face-to-face interaction provided in traditional classrooms to understand complex concepts, particularly in psychology and other social science courses (Bailey et al., 2017; Bawa, 2016; Kemp & Grieve, 2014; Nguyen, 2015; Richardson et al., 2017; Symeonides & Childs, 2015; Vayre & Vonthron, 2018). There is little understanding of the value of face-to-face interaction for students to master complex psychological concepts (Daffin & Jones, 2018). The purpose of this dual-focus phenomenological study was to explore the meaning of purposeful interpersonal interaction and the experience of content mastery among undergraduate working students taking online psychology courses. Understanding how purposeful student–instructor interaction facilitates the mastery of complex psychological concepts when face-to-face interaction is lacking was especially important for adult working students who require the flexibility that online education offers to complete their degrees.

In this chapter, the background, problem statement, purpose of the study, research questions, theoretical framework, nature of the study, definitions of terms, and significance of the study are provided. Furthermore, the assumptions, limitations, scope of the study, and delimitations are discussed. A summary of the content concludes this chapter.

Background

Online education has grown as an alternative to the traditional academic experience in higher education (Garratt-Reed et al., 2016; Haywood & Murty, 2018). Despite the questioning by faculty regarding the ability to offer quality education in psychology courses online, the number of online psychology degrees offered at higher education institutions has grown rapidly (Garratt-Reed et al., 2016). One reason for the skepticism has been that in the online environment, college-level courses may be thought of as more difficult than traditional classroom learning (Daffin & Jones, 2018). Furthermore, Haywood and Murty (2018) found that interactive processes with peers and instructors in online courses might create barriers (e.g., confusion, communication, and collaboration) to full mastery of course content in certain subjects, psychology among them. For example, it was difficult to detect confusion when there was no synchronous face-to-face interaction in the online environment; the lack of face-to-face interaction made it challenging to provide feedback and support to aid progress when the learner became confused (Damasio, 1994). Additionally, a recent study of online graduate psychology students found many factors influence students' satisfaction and mastery of online courses, including faculty-to-student interactions, faculty training, teaching methodologies, and student factors such as motivation (Viola et al., 2019).

Alqurashi (2018) revealed that learner–content interaction was a significant and positive predictor of student satisfaction while online self-efficacy was a significant predictor of satisfaction among students. The findings also indicated that learner–learner interaction was not a positive predictor of student satisfaction. Based on the findings,

Alqurashi recommended the need for future research to focus on how learner–learner interaction fosters student satisfaction. In a different study, Martin and Bolliger (2018) examined the perceptions of students regarding various engagement interventions adopted in online courses based on Moore's interaction framework. The findings indicated that most of the students preferred leaner-to-instructor interaction. Martin and Bolliger also found that in the learner-to-learner category of engagement, most of the students preferred collaborating using online communication tools. Based on the findings, Martin and Bolliger recommended the need for future research to focus on the perceptions of undergraduate students and faculty regarding interaction strategies to enhance learner-to-learner and student-to-teacher engagement.

There was a gap in the recent literature on how learner–learner interaction fostered student satisfaction and perceptions of undergraduate students and faculty regarding interaction strategies. Research had focused almost exclusively on the learning and engagement needs of nursing and business students with little attention to students in the social sciences (Frazer et al., 2017; Raymond et al., 2016; Xu & Jaggers, 2014). Students had vastly different perceptions about their online learning experiences depending on the course or courses they were enrolled in (Kemp & Grieve, 2014). Addressing this gap had implications for improving future online course structure and design and enhancing interactive processes (see O'Shea et al., 2015). Further research, according to Garratt-Reed et al. (2016), may provide valuable information about modifications to the online learning environment that could improve the interactive experience.

Problem Statement

Colleges and universities increasingly offer online courses in addition to traditional face-to-face courses, and 31.6% of higher education students are enrolled in at least one online course (Seaman et al., 2018). Little scholarly attention had been given to studying students' perceptions related to online learning. Mixed findings existed in the research literature on student achievement in online versus face-to-face courses with some researchers finding lower levels of achievement in online courses compared with face-to-face courses (Shu & Gu, 2018) and others finding no significant differences in achievement across these learning modalities (Paul & Jefferson, 2019). Literature in this area was sparse because few researchers had investigated the correlation between online student experiences, perceptions, and academic achievement. Some researchers suggested that student performance in online versus face-to-face higher education courses might vary depending on the nature of courses or subjects (Jaggars, 2014). In particular, students might struggle to master content in online courses in subjects that require extensive interaction (e.g., science, technology, engineering, and mathematics) with instructors and classmates to fully comprehend complex concepts (Ballen et al., 2019). With the growing need for the adoption of student-centered learning in higher education, the importance of enhancing learner interaction is on the rise (Klemenčič, 2017).

The comparative difficulty of mastering content in online courses might differentially affect working adult students in psychology because older students are more likely to opt for online courses to accommodate schedule demands related to full-time employment and family (Cavanaugh & Jacquemin, 2015; Johnson, 2019). Despite

stereotypes and previous speculations in the research literature about older learners as digital immigrants who lack the technological competence to succeed in online courses (Kirschner & De Bruyckere, 2017; Salazar-Márquez, 2017), there is evidence that older students persist and achieve at higher levels than younger students in online higher education courses (Greene et al., 2015; James et al., 2016). However, as previous research suggested, students benefited from hybrid courses that provided real and hands-on experiences (Viola et al., 2019).

Additional qualitative research was needed to better understand how higher education students experienced interaction in the online learning setting as it influenced their engagement and learning. For instance, Mehall (2020) recommended the need for future studies to examine the effect of purposeful interpersonal interaction and minimizing nonpurposeful interaction on various student learning outcomes. In addition, Castro and Tumibay (2021) acknowledged the need for students and online educators to use information from various subjects to determine the effectiveness and varied perspectives regarding interaction and engagement in online courses. Previous literature indicated a need to better understand interaction processes in online courses (Baxter & Haycock, 2014; Carr, 2014; Knapke et al., 2016; Viola et al., 2019) and how the mastery of complex concepts in courses required extensive interaction to fully understand the course content (Paul & Jefferson, 2019).

Purpose of the Study

The purpose of this phenomenological study was to explore the meaning of purposeful interpersonal interaction and content mastery among undergraduate working

students taking online psychology courses. There was a need for a deeper understanding of how working adult students, age 25 and older, experienced online psychology courses given that evidence suggested certain subjects may be difficult to master in this modality (Roehling et al., 2017). Furthermore, the interaction processes with peers and instructors in online courses affects full mastery of course content in subjects, including psychology (Baxter & Haycock, 2014). Understanding how such interaction processes were experienced as adult students were learning course content was important because these students often require the flexibility that online education offers to complete their degrees.

Research Questions

The phenomenon of interest in this study was the experience of online learning in psychology courses, in particular the experience of purposeful student–instructor–peer interaction and the experience of content mastery. The following research questions (RQs) were designed to fulfill the purpose of this study:

RQ1: What is the experience of purposeful interpersonal interaction in undergraduate students taking online psychology courses?

RQ2: What is the experience of content mastery for undergraduate students taking online psychology courses?

Theoretical Framework

Two theories formed the theoretical framework for this study: (a) constructivism, and (b) adult learning theory. Constructivism, as applied to the process of learning, was initially proposed by Piaget (1971) but had been elaborated substantially by other

theorists such as Vygotsky (1978). The core proposition of constructivism is that learning is not a passive process in which students receive information from instructors (Huang, 2002). Instead, learning as conceptualized in constructivism is an active process in which learners build their knowledge bases through highly individualized interaction with new information (Huang, 2002).

Adult learning theory, or andragogy theory, provided the second component of the theoretical framework in the current study. Knowles (1973) posited that children and adults, ranging in age, learn in ways that are fundamentally different and perform best with particular learning needs and considerations. Although adulthood encompasses a wide age range, andragogy is a learner-centric model that reflects the specific needs of the learner, with age being the critical factor (Ford et al., 2017). Six assumptions form the basis of adult learning theory:

1. Self-concept: Adults are independent and self-directed and learn best in conditions that allow for autonomy.
2. Experience: Adults learn optimally when connecting new concepts or facts with their own prior life experiences.
3. Readiness to learn: When adults perceive a true need to learn new information, they will feel a greater readiness to learn.
4. Orientation to learning: Adults learn optimally when new information is task or problem focused.
5. Internal motivation: Intrinsic rather than extrinsic motivators tend to drive adults to learn new information.

6. Need to know: Adults learn optimally when the new information has clear application or relevance in their lives (Knowles, 1973).

Constructivism was a useful component because it helped me clarify how online interaction does or does not stimulate the active construction of knowledge and understanding of psychology concepts through the course. Adult learning theory helped me clarify how such courses do or do not stimulate optimal learning in adults by attending to the theory's six underlying assumptions. A more detailed description of the theoretical framework is provided in Chapter 2.

Nature of the Study

I used a phenomenological design, which was appropriate for research into participants' lived experiences and for understanding how they interpret their experiences (see Moustakas, 1994). A phenomenological design entailed a return to experience with a view to obtaining detailed descriptions that provided insights into the issues under study (Aagaard, 2017). The choice for this research design as the best approach to the current study was supported for various reasons. I explored the perceptions of working adults regarding online interactive processes in online psychology courses. Because phenomenological research addresses participants' experience of the phenomenon in its perceived immediacy (Moustakas, 1994), the phenomenological design enabled me to develop an understanding of how working adult students experience interaction in online psychology courses.

For the study, I recruited 10 participants, which was an appropriate size for qualitative interview-based inquiry and that was the point at which data saturation was

achieved (see Malterud et al., 2016; Robinson, 2014). Because the phenomenological design works best when the sample is homogenous, inclusion criteria were working Black/White adults age 25–30 with experience taking online psychology courses within the last 2 years. Researchers who used a phenomenological design had a typical sample size ranging from three to 10 participants (Symeonides & Childs, 2015). Participants were recruited from Facebook and community bulletin boards once Walden's Institutional Review Board (IRB) approved the study to be conducted. I used the snowball sampling method and asked participants to refer and distribute my contact information to other people who met the inclusion criteria.

According to safety measures during the COVID-19 pandemic, interviews were conducted virtually via Google Duo video conferencing; interviews took approximately 45–60 minutes and consisted of open-ended, nonleading questions. Using Google Duo videoconferencing allowed participants to be comfortable while interviewing in a private and convenient environment. For qualitative analysis, interviews were recorded to ensure accuracy. To verify the accuracy, I emailed each participant a summary of their interview for member checking.

The data were analyzed using Moustakas's (1994) recommendation on phenomenological analysis of data. Notably, the first step in the data analysis process was epoche and horizontalisation. Under this step, every relevant expression was listed and preliminary grouping completed (see Moustakas, 1994). This step was followed by the reduction phase that entailed testing every expression. Following Moustakas's (1994) recommendation, in the second step of the phenomenological analysis of data, I sought to

determine whether the expression contained sufficient and necessary moments of the experience. Also, in this step, I determined whether the expression could be labeled or abstracted. The third step of the data analysis process was elimination, which focused on removing expressions that failed to meet the requirements established in Step 2. That step was followed by the clustering phase, in which I grouped the remaining invariant constituents (see Moustakas, 1994). In the next step, thematic labels were applied to the invariant constituents. The invariant constituents and their corresponding themes were then checked and compared for purposes of compatibility. Individual textual descriptions were then constructed, and a composite description of the meanings and essences of experience was developed for the research participants as a whole.

Definitions

Adult learning theory: Adult learning theory, or andragogy theory, posits that adults learn in ways that are fundamentally different from children and that adults have more productive and successful learning experiences when instructors take their particular learning needs and priorities into consideration (Knowles, 1973).

Constructivism: The core proposition of constructivism is that learning is not a passive process in which students receive information from instructors; instead, learning is conceptualized as an active process through which learners build their knowledge bases through highly individualized interaction with new information (Huang, 2002).

Higher education: Higher education is considered any postsecondary schooling (Education USA, 2019). That includes programs in community colleges, universities, and technical schools.

Interaction in online learning: Interaction in online learning refers to all forms of learner-to-learner engagement or leaner-to-teacher engagement that aims at enhancing learning outcomes (Martin & Bolliger, 2018).

Online learning: Online learning refers to learning "in a university course, which required students to interact with instructors and course materials via the internet with no expectation of attending a university campus" (Henry, 2018, p. xxiii).

Traditional learning: Traditional or face-to-face learning connotes learning that takes place within campus premises characterized by scheduled courses (Merriam & Tisdell, 2015).

Assumptions

Assumptions in research are the aspects of a study outside the researcher's control but must be assumed as true for the research to carry out (Simon, 2011). For the current study, I assumed that participants would answer interview questions honestly and to the best of their knowledge. I also assumed that the research participants would understand the interview questions. This assumption was necessary to ensure that participants' responses would represent their experience with online interactive processes in online psychology courses; member checking was needed to establish validity. I also assumed that the interview guide was a reliable and valid instrument for purposes of data collection. This assumption was verified through the member checking process. Finally, I assumed that a sample size of 10–12 participants would be appropriate for reaching data saturation in this phenomenological research.

Scope and Delimitations

The scope of this study was working adult students taking higher education psychology courses online, with a focus on students' experience of their interpersonal interaction with instructors and peers. Only undergraduate working adults who had been enrolled in an online psychology course within the past 2 years, were between 25 and 30 years of age, and had taken both an online and traditional psychology course were eligible to participate in the study. Because of the qualitative nature of the study, findings were not transferable to other higher education online courses. The study was limited to psychology courses in an online learning setting because previous studies indicated that psychology courses contained content that required interaction among students, which proved challenging for online learners (Toven-Lindsey et al., 2015). Adult learning theory was used as a framework to explore the online psychology courses within student performance and overall satisfaction. This study was guided by adult learning theory and constructivism; these were chosen because each was well suited to explore the perception and success of adult students in online psychology courses. Other learning theories such as behaviorism, which had a primary focus on observable behavior, and cognitivism, which focused on understanding the mind, were not suitable to guide the study.

Limitations

Phenomenological research relies on the richness of data collected from a small number of participants who are homogenous with respect to their experience with the phenomenon in question. The sample size in the current study was adequate to allow for some richness and depth of data, but the participant-specific nature of the responses

limited the transferability of the results. Transferability was facilitated by providing thick description of the research process, including procedures for participant recruitment, data collection, data analysis, and interpretation. To mitigate limitations to dependability of the results, audit trails were used to verify that results reported were consistent with the procedures used. Researcher bias also presented significant limitations that could have adversely affected my ability to interpret the data objectively. To provide accurate accounts of participants' experiences, I used the epoche/bracketing process to acknowledge and set aside prior assumptions. Another limitation was participants' unwillingness to share or elaborate on their perceptions because they were reluctant to disclose their inability to master course material. Lastly, social desirability bias presented a limitation to the study given that participants may have wanted to present themselves in the best possible light.

Significance

I addressed a gap in the literature to deepen the understanding of what was already known about adult working students' perceptions of online interactive processes in a virtual versus in-person classroom environment. The study may clarify how virtual interaction processes facilitate or impede the learning of required course content, especially in psychology. Focusing on online interactive processes and how they influenced the achievement of learning outcomes may provide insights useful to policymakers for improving the effectiveness of online learning. These insights have the potential to improve course design and implementation (see O'Shea et al., 2015; Xu & Jaggars, 2014) that could benefit older working adult students more likely to enroll in

online courses to further their higher education (see Cavanaugh & Jacquemin, 2015; Johnson, 2019).

Summary

Online education has grown as an alternative to the traditional academic experience in higher education (Garratt-Reed et al., 2016; Haywood & Murty, 2018). Recent research findings have been mixed, suggesting that the comparative learning advantage to online versus traditional classrooms was undetermined (Alqurashi, 2018; Nguyen, 2015). By exploring adult nontraditional working students' perceptions of online education and instruction, specifically the interaction experience with instructors and peers, I hoped to address the gap in the literature. Given the evidence that certain subjects may be difficult to master in the online modality, there was a need to understand whether online interaction processes facilitated or impeded working adult students' mastery of psychology course content (see Baxter & Haycock, 2014; Jaggars, 2014). Chapter 2 presents an exhaustive review of the literature related to the research topic.

Chapter 2: Literature Review

The recent literature showed mixed findings regarding the achievement of college students taking online courses versus traditional courses. Many researchers argued that face-to-face contact provided in traditional classrooms is needed to understand specific concepts, particularly in psychology and other social science courses (Bailey et al., 2017; Bawa, 2016; Kemp & Grieve, 2014; Nguyen, 2015; Richardson et al., 2017; Symeonides & Childs, 2015; Vayre & Vonthron, 2018). Other experts claimed that working adults who need the flexibility of an online environment to accommodate their busy work schedules were more prone to persist and achieve success in the online format (Alqurashi, 2018; Chen et al., 2016; Fedynich et al., 2015; Kebritchi et al., 2017; Kim et al., 2016; Sun & Chen, 2016). There was a need to determine what interactive processes, for the age group 25 to 30 years, provide the necessary classroom experience for mastery of online content.

The comparative difficulty of mastering content in online courses might differentially affect working adult students in psychology because older students are more likely to opt for online courses to accommodate schedule demands related to full-time employment and family (Cavanaugh & Jacquemin, 2015; Johnson, 2015). Students might struggle to master content in online courses in subjects that require extensive interaction with instructors and classmates to fully comprehend the material (Jaggars, 2014). Courses in social sciences, such as psychology, might exemplify this problem (Xu & Jaggars, 2014). Several studies provided examples of students' success or failures in the online environment based on the goodness of fit between student work habits, student

learning styles, and other learning factors that are supported or negated in this environment (Bailey et al., 2017; Bawa, 2016; Kemp & Grieve, 2014; Nguyen, 2015; Richardson et al., 2017; Symeonides & Childs, 2015; Vayre & Vonthron, 2018). Despite stereotypes characterizing older learners as digital immigrants who lack the technological competence to succeed in online courses (Kirschner & De Bruyckere, 2017; Salazar-Marquez, 2017), there is evidence that older students persist and achieve at higher levels than younger students in online higher education courses (Greene et al., 2015; James et al., 2016). However, older students underperformed in psychology and other social science subjects when compared with counterparts in similar face-to-face courses (Xu & Jaggars, 2014).

To accommodate the changing college student demographics, more universities and colleges are offering online courses/programs; since 2009, the percentage of American college students over the age of 25 years has risen exponentially (USA Government Statistics, 2018; O'Toole & Essex, 2012; Torres & Beier, 2018). The changes in students' needs for easily accessible and affordable courses became a concern for university recruitment, with some online universities lowering their standards to accommodate the growing population of older adult students wanting to further their education (Clinefelter & Aslanian, 2016, 2017; Eom & Ashill, 2018; Kim et al., 2016). Additional qualitative research was needed to better understand how higher interaction among students in online courses influences their engagement and learning (see O'Shea et al., 2015). Perspectives of older working adult students were important to understand

because these students often rely on online course opportunities to advance their higher education (see Jaggars, 2014).

Literature Search Strategy

The search for current literature related to the topic included multiple databases including Academic Search Complete, Educators Reference Complete, Education Resources Information Center, EBSCO Databases, JSTOR, Psychology Collection, Psychology, and Behavioral Sciences Collection, Sage Journals Online, and Taylor and Francis Online. The key search terms were *education online*, *online learners*, *perceptions of online students*, *E-learning*, *success in online courses*, *content mastery in online courses*, *successful student outcomes in online courses*, *content delivery in online courses*, and *success in online education*. The number of sources found between the years 2015 to 2019 was well over 300; however, for the current study's purpose, the articles accessed for use were limited to 98 based on the large number of articles focused on nursing education online, which were excluded.

Theoretical Foundation

Constructivism and adult learning theory were used to guide the current study. Student learning and retaining information necessitate skills based on constructivism. Because higher education has changed dramatically over the past half century, the lessons in communication immediacy have presented critical issues that have integrated active pedagogy from educators. Constructivist theory and adult learning theory were selected as conceptual foundations for this study as a lens through which to view how adult online students focused on psychology courses learn in an online environment that may be

unfamiliar to them. This approach established the foundation for discerning how working adult students perceive their ability to master the content presented to them in online courses.

Constructivism

Constructivism posits that prior knowledge is the groundwork for building new ideas (Piaget, 1971); constructivism's focus is on active rather than passive learning. Fundamentally, constructivism focuses on how students learn by incorporating new information and experience into existing ideas; this is what Piaget called the process of assimilation, which is followed by restructuring or modifying what is already known to fit the new ideas, a process called accommodation. The concepts of assimilation and accommodation, per Piaget, are complementary functions. In the case of online education, constructivism suggests that to acquire new knowledge, the student must adapt to the new learning environment; this adaptation requires the student to first assimilate (i.e., get comfortable with) and then accommodate (i.e., make adjustments for) elements of online learning that are unfamiliar or uncomfortable (Knowles, 1973, 1978; O'Toole & Essex, 2012). In online learning, the constructivist theory provides a useful perspective for examining the experiences of adult learners who must become accustomed to technology and the features of the online classroom.

Scholars have used constructivist theory to examine the process of online learning by adults. Ruey (2010) stated that instruction intended to make adult learners feel included and make them comfortable in what may be an unfamiliar environment is best to achieve learning goals. Hamat and Embi (2010) took a similar approach, noting that

online instruction was fundamentally different from in-person instruction and that traditional classroom materials and strategies could not simply be inserted into online learning without major structural changes. Concurring with this view was Chan (2010) who stated that designing an online class instruction strategy mandated that the instructor take into account the distinctive nature of online learning.

Constructivist theory in the context of learning has been employed in several recent studies. For example, Ozkara and Guven (2019) examined primary school teacher training in science and technology in Turkey. Findings showed that measures to introduce a constructivist approach to the curriculum mitigated problems with the teaching and learning process; suggestions were made to ensure that all future complex curricula be designed to build on students' existing knowledge. In another example of such an approach, Wang and Tsai (2019) found that grade level differences affected high school students' motivation for and conceptions of learning science; the higher the grade level, the more inclined a student was to learn. These researchers stated that constructivist theory explained those differences, as a student with greater prior knowledge (and more school experience) was more likely to be receptive to future knowledge in a given field.

Theoretical approaches have been used to link a particular learning/teaching strategy to constructivism. For example, Qiu (2019) examined what he called English mobile learning in the context of constructivism, focusing on how a constructivist approach would build on the student's prior knowledge. Furthermore, Tilak and Glassman (2020) noted that the traditional in-person classroom focused on what they called top-down, content-heavy instruction and suggested that online learning should

follow a different path. Tilak and Glassman noted that the more individualized nature of online learning allows teachers to use a constructivist approach to instruction. That is, teachers can tailor their teaching to the needs of each student. It might be debatable how applicable this is in a large online classroom, but there is a greater opportunity to use constructivism when the teacher can have short interactions with individual students.

Liu and Chiang (2019) examined online instruction for middle school English as a second language students in China. Using surveys, Liu and Chiang found that students viewed the online experience as positive and said that it helped their learning. For many of these students, this was their first exposure to online learning as the study was conducted in an underdeveloped area of China. Liu and Chiang posited that a constructivist approach to online instruction (i.e., a strategy that took the students' level of prior knowledge into account) was responsible for its success.

Goldenberg (2019) posited, following constructivism, that elementary-level students would best be able to learn computer programming if they were firmly grounded in mathematics. The idea Goldenberg promulgated was that the structured and analytical nature of mathematics would serve as ideal preparation for computer programming, which employs the same type of skills. Constructivist theory suggests that a more complex type of learning (e.g., programming) should be built on a similar kind of instruction (e.g., math; Goldenberg, 2019).

Adult Learning Theory

Adult learning theory (Knowles, 1978) refers to a scientific understanding of how and by what means adults learn. Knowles (1978) found that andragogy as related to adult

learning focuses on motivation, orientation, readiness, foundation, self-concept, and desire to know. The working adult learner would not take a college course unless they were prompted to expand their knowledge base for whatever reason (e.g., higher pay, new job); working adults often adapt to the only environment available that accommodates their busy lives: online education.

In the context of online learning for adults, adult learning theory has been employed for greater understanding. If a person adopts the fundamental assumption of the theory that adults learn differently from younger people and their motivations are different (Knowles, 1978), then the person can assume that adults' online learning should be structured with those differences in mind. For instance, Yarbrough (2018) used adult learning theory to craft a model for adults in an online platform. Yarbrough argued that online instruction, when administered to adult learners, must be designed to meet the needs of these learners, which per the theory are considerably different from those of traditional (i.e., younger) students. The model was constructed to serve the needs of adult learners who had active lives outside of school (e.g., work, family), with flexible learning modules, recorded lectures, and other features.

Ferreira et al. (2018) used the term andragogy to refer to the science of teaching adults. Ferreira et al. noted that adults are more sophisticated learners and are more likely to adapt to different learning contexts than younger people. Ferreira et al. did not conduct a study; rather, they reviewed the extant literature on the topic to form a theoretical perspective. The nature of adult learners makes them ideal candidates for online learning (Ferreira et al., 2018). Ferreira et al. noted that adult learners usually have both extrinsic

and intrinsic motivations that are different from those of traditional students; for example, an adult learner may have a specific economic incentive in mind (extrinsic; the need for increased income) or may wish to better themselves (intrinsic; a wish for greater knowledge).

Diep et al. (2019) used adult learning theory to understand the needs of adult online learners. Diep et al. noted that a cohesive approach to designing online courses for adults must take into account their motivations (both internal, i.e., desire to improve, and external, i.e., career mandates) as well as their distinctive and sophisticated approach to learning compared to younger students, with their relative lack of life experience. Diep et al. also noted that adult learners tend to be more goal oriented than others. Therefore, online instruction aimed at adults must be crafted toward goal orientation (career fulfillment, personal growth) rather than general learning (acquisition of knowledge or expertise without any specific goal in mind), and curricula should focus on practice rather than theory (crafting curricula to meet adult students' needs rather than on formal models).

Adult learning often occurs with a distinctive career goal (e.g., advancement, promotion, and certification) in mind, as opposed to adolescent/young adult learning, which is often performed with no set goal. Mukhalalati and Taylor (2019) noted that health care educators teaching adults should keep in mind that adult learners in the field are goal oriented and often seek specialized learning; therefore, curricula should be oriented toward specific knowledge in a field rather than general understanding. Bierema (2018) agreed that adult learners are different from younger learners and that their

different lifestyles and more concrete goals should be reflected in health care education for adults. Like Mukhalalati and Taylor, Bierema noted that many adult health care learners are already professionals in the field. Therefore, their needs and motivations are more focused, and curricula should be designed with that in mind (Bierema, 2018).

These two theories, combined, form the theoretical framework for the current study. Constructivist theory suggests that instruction is best when based on the student's prior knowledge. Adult learning theory suggests that adults learn in a fundamentally distinctive way due to their learning styles, life experience, and different sets of motivations. Combined, these theories suggest that online instruction administered to adults must be designed in a way that is unique to them, and that conventional instructional methods may not work as well as they would for younger students. Such instruction might be focused on, for example, enhancing existing career knowledge or expertise rather than providing an introduction or an overview of a subject.

Literature Review

Student Experiences in the Online Environment

Researchers in the limited number of academic articles from experts in such fields as psychology, sociology, and education attributed the success of online learning to the students' mastery of its content (Kebritchi et al., 2017; Lowenthal et al., 2015). In 2016, The Learning House in conjunction with Aslanian Market Research Group examined the elements of online courses through student perspectives and quantitative data and found that the lower tuition costs of online universities and courses drive the decision for nearly all students enrolled in at least one online course (Clinefelter & Aslanian, 2016).

However, by the end of 2017, the same researchers found that although the price was still a factor, it was not the focus for many students. The 2017 survey showed results for reasons why students choose online education as the compatibility of schedules and the online programs offered the exact program that met their unique needs (Clinefelter & Aslanian, 2017). The reports from both 2016 and 2017 claimed that 90% of online students are highly satisfied with their experiences in this modality. The survey results revealed that the reason for such a shift was due to the student's preference in taking online courses based on the convenience of the environment in relation to their busy schedules. The demographics from the 2017 report indicated that 21% of online students were 25 to 29 years of age and 38% were 30 to 39 years of age, and the experts suggested that this rate would climb to over 50% by the year 2020 (Clinefelter & Aslanian, 2017). The population of adults over 25 years has increased exponentially over the past several years (National Center for Education Statistics, 2018). With such an increase in nontraditional student populations found in the online environment, research has trended toward discerning the elements for success and failure.

Prior studies have also examined the percentage of online students' experiences in the online environment. Hixon et al. (2016) questioned a sample of online students (*N* =3,160) about their perceptions of quality, i.e., understanding and retaining content, ease of navigation within the online course, and quality of materials provided for instruction. The results indicated a significant difference between novice and experienced online learners. Along with this divide, the authors noted the sample of experienced online learners was found in the 26-44 age group (Hixon et al., 2016). The results suggested,

further, that the perceptions of content quality in the online courses differed based on students having taken an online class. The authors also noted that the higher percentage of those students who previously enrolled in an online class was older, non-traditional, and worked outside the home. These same students were currently enrolled in online courses. While most students found taking online courses are, older, more likely to have a full-time job, and often, a single parent, the convenience of online education does not negate the challenges such student populations' face in this type of educational environment (Deming et al., 2015; Escueta et al., 2017).

Some experts believe the students' traits, characteristics, and performance expectations provide clarity to such questions (Diep et al., 2016; Jaggars & Xu, 2016). Diep et al. (2016) found that performance expectancy was prevalent for students taking online courses. Testing such traits as age and gender, employment status and education levels, the perception of learning benefits, and social capital, the authors used a cross-sectional methodology with a sample of 181 students. Findings suggested that older students were prone to having positive attitudes toward online courses and the respective coursework (Diep et al., 2016). The authors also noted that engagement with online coursework was not interrupted by students' outside work schedules; furthermore, the students were not concerned with social capital and regularly participated in online chats, bulletin board postings, and online interaction, negating any belief from previous studies claiming the online environment promotes social isolation (Diep et al., 2016).

Similar to Diep et al.'s (2016) work, Jaggars and Xu (2016) took their study one step further, examining perceptions of students in the online environment. The focus of

Jaggars and Xu's (2016) study was on whether interpersonal interaction made a difference in the students' perceived quality of course content. The related question of how online course design influences student performance was posed. The quantitative results of collected grades from the second sample of online students ($N = 678$) when applied to the qualitative results from the interviews based on interpersonal interaction, showed successful outcomes (grade of C or above). The results led the authors to believe that there was no correlation between student social interaction and success in the class, but there was an association between the students' social interaction and their perception of the course's quality (Jaggars & Xu, 2016).

Such perceptions were possibly related to the convenience of the class and not the class itself. Ortagus (2017) hypothesized that students who enrolled in online courses due to their convenience were more likely to have positive experiences in the online environment with higher successful outcomes. He also suggested that students from underprivileged backgrounds, including first-generation college students and minorities or low-income families, will have negative experiences with online courses and are less likely to be successful. The final hypothesis stated that those higher educational institutions more concerned with revenue generation or access provisions versus status improvement would have a higher percentage of positive experiences among online students. Using data from the National Postsecondary Student Aid Study (NPSAS), Ortagus examined the online enrollment patterns, comparing data from over 29 thousand students with grade evaluations, demographics (particularly age and income), and college focus (i.e., academic standing concern or increased tuition needs). The results did not

support the hypothesis that underprivileged students would have difficulty navigating online courses. However, what Ortagus did find was a generally positive perception of online learning from all students examined based on their actual major and not the demographics.

While student experiences in online courses were examined based on the positive or negative perception of the online experience itself, other experts were curious to know if such online experiences compared to traditional classroom experiences. Phillips (2015) compared a traditional live lecture (TLL) to an interactive online learning module (OLM) with a sample of 200 pharmacy students. Over six months, students participated in a two-phase learning project in courses that addressed advanced ambulatory care (offered to 3rd-year professional students and evidence-based medicine (offered to 1st-year professional students); in each class, participants were randomized into two separate groups with one group given content through OLM and the other through TLL. Results of the effectiveness of learning were measured by exams, and surveys administered at the end of the course provided data on student perceptions. Results showed the OLM participants' perceptions were positive toward the learning method, claiming that OLM provided the luxury of working independently as their schedule permitted. Results from exams between the two groups were not significantly different; both OLM and TLL students passed with an overall mean score of 85.8% (Phillips, 2015). For the following reasons, participants favored an increase in coursework delivery through OLM: working independently at their own pace, easier to accommodate their schedules, organization of content delivery made it easier to navigate, assessment access for all content, and quick

access to resource materials through the OLM platform. The students found OLM a positive means for learning and were more satisfied with their content mastery compared to students in the traditional class.

There were suggestions from some experts who claimed that online education failed to offer the means for students to truly understand the content because immediate interaction was lacking (Reid-Martinez & Grooms, 2018; Van Doom & Van Doom, 2014). Experts Reid-Martinez and Grooms (2018) examined the comparative effectiveness of interactive course communication in an online and a traditional college class. The authors solicited the perceptions of communication methods and instructor responses found in both environments through a constructivist theory lens. Since the constructivist theory lends credence to its problem-based learning method, such a focus on learning in the online environment increases the ability for critical thinking skills. Reid-Martinez and Grooms (2018) found positive outcomes for student success in online education. The authors recognized how contemporary technology has quickly become the norm in educational approaches, and for the future success of students pursuing educational goals via online platforms, the attitudes of academia have far to go on accepting this as a means for educational success; contrary to academics, however, students' attitudes toward pursuit of educational goals online are positive.

Perceptions of online learning vary; those whose perceptions are negative claim that the benefit of convenience does not outweigh students' need for active learning (Kemp & Grieve, 2014). Others find fault with the online system, believing there to be a disparity between face-to-face scholarly interaction and attempts to achieve the same

communication rigor within the online environment (Lee, 2017). Kemp and Grieve (2014) sought the preferences of 3rd-year, undergraduate psychology students (*N*=67, mean age=24) for online or traditional, face-to-face courses; participants were familiar with both learning environments. Results from written exercises, classroom discussions, and written exams showed a preference for the face-to-face over the online class format. Reasons for the preference included greater engagement and immediate feedback in physical classrooms and difficulty comprehending course material without instructor examples in online courses. The most common reasons given to support taking online courses included the convenience and ease of accommodating one's schedule and a more extensive array of contributions to discussions online where shy students were more willing to speak up.

Nguyen (2015) sought to find evidence that online learning was just as effective as face-to-face courses. Findings show that for higher education, successful outcomes were based on (a) presentation of material, (b) course comprehension, (c) class interaction online with chats, (d) message boards, and (e) student self-efficacy associated with a motivation to succeed. In a review of 350 studies that examined the propensity for success, a majority found no significant difference between mediated instructions versus traditional. The mixed and negative findings were fewer in number than findings with positive or null conclusions (Nguyen, 2015). While multiple researchers found student experiences in the online environment were varied, positive experiences were based on having a clear understanding of what taking an online class entailed (Nguyen, 2015); most studies showed that adult, working students had a more positive outlook toward

online courses when recognizing that success requires tenacity, performance expectations, and good communication (Nguyen, 2015). For adult students, positive online experiences were associated less with convenience and more with an understanding of course content.

Working Adult Students and the Online Environment

Studies show a large percent of the online student population is 25 years and older who work full or part-time jobs, have families, or are single parents (National Center for Education Statistics, 2018; USA Government Statistics, 2018). While results are mixed, most experts agree that older students tend to have stronger focus, are more responsible, and can integrate work and school easier than those traditional students taking online courses (National Center for Education Statistics, 2018; USA Government Statistics, 2018). Many experts claimed the difference in success was based on the learning styles of different age groups of students (National Center for Education Statistics, 2018; USA Government Statistics, 2018).

Van Doom and Van Doom (2014) examined learning styles of non-traditional versus traditional students using literature related to different learning needs, institutional support, educational culture, and different course subjects. The purpose of this study was to determine differences between online and in-class student learning based on the type of student, the student's age, and course subjects. Findings showed that traditional undergraduate students (defined by the authors as aged 18 to 25 and taking a class on campus) were more prone to needing inclusive teaching practices, such as personal contact lectures and discussions. However, the authors also found that non-traditional

(defined as over the age of 25 years) students preferred a flexible class schedule and were able to work independently without many peers and/or instructor contact. Learning styles varied between the two groups, with non-traditional learners more likely to relate real-life experiences to the coursework. Van Doom and Van Doom (2014) also found differences between non-traditional (defined as over the age of 25 years) and traditional students related to course-subject needs, where traditional students needed more contact and tutoring for such courses as math, business, and English than their non-traditional counterparts. Again, non-traditional students were more prone to relating social science course materials, such as psychology, to personal, real-life situations. The authors recommend that instructors be aware of the type of student they were teaching as well as recognizing the differing needs between traditional and non-traditional students and the type of class. Van Doom and Van Doom (2014) concluded that non-traditional students were better able to master content than their traditional counterparts in an online environment.

To determine if non-traditional students, such as those students examined in Van Doom and Van Doom's (2014) study, Fedynich et al. (2015) examined a similar population but with non-traditional (defined as over the age of 25 years) students who were already in the workforce. The authors compared perceptions of course productivity, based on content mastery and grades, between older online graduate students and their younger counterparts. The authors used a sample of 249 graduate students taking online courses in such disciplines as Arts, Sciences, Business, Education, Engineering, Agriculture, and Human Sciences. Of the sample population, 59% were over the age of

30, were more satisfied with their course outcomes, and scored higher on related exams; the older students claimed their grasp of course material was facilitated by their real-world experience and being able to relate their coursework to working models found in their present jobs. Fedynich et al. (2015) concluded that this ability was potentially the reason for older students' success.

Tseng et al. (2018) investigated business students' success in online courses based on soft skills (e.g., strategies, motivation, and social skills). The authors hypothesized that graduate business students had a better grasp of soft skills used in an online environment versus undergraduate students, claiming that students already working in a management field understood that soft skills facilitated the learning process. Data were collected from a sample(N = 162) of business students enrolled in online courses and analyzed using a MANCOVA analysis. Findings show that graduate students already established in a management position were more likely to succeed in their online courses than undergraduates. However, results also found no differences in social skills between the two groups; instead, differences were found only in strategies and motivation between graduate and undergraduate students and between participants already working in management compared to those who were not. The results suggested that working adult students fare better in online courses owing to their real-world interaction with the content they are studying in their online courses.

The studies discussed here explain how adult working students taking online courses, using their life experience and skillset acquired from their real-world jobs, generally cope with the online learning environment; however, while older, working

students perform well online, the exception may be in courses where the mastery of complex content is required. Specifically, courses that require the mastery of complex content may be more difficult for adult working students because they are accustomed to learning more traditionally than the online classroom environment affords, a concept that is suggested in the following literature review.

Keys to Success for Adult Students in Online Courses

Numerous studies have identified key factors related to success in online courses. Whether or not these experts believed that content mastery was feasible, most agreed there were certain factors necessary for student success in online environments (Bailey et al., 2017; Bettinger et al., 2017; Greene et al., 2015: Hung, 2016; Mbati & Minnaar, 2015; Trammell et al., Herold, 2018). While most experts will agree maturity plays a factor in success in online courses, self-efficacy, social interaction, instructor presence, and motivation are the primary influences on student success (Alqurashi, 2018; Bailey et al., 2017; Broadbent & Poon, 2015; Brown & Park, 2016; Butz & Stupnisky, 2016; Chen et al., 2016; Diep et al., 2017; Eom and Ashill, 2016; Eom & Ashill, 2018; Kim et al., 2016; Vayre&Vonthron, 2018).

Bailey et al. (2017) examined the influences on college students' choice to take courses online or face-to-face. An online survey was administered to 744 students to determine which factors influenced their decision to take courses traditionally or online; factors included: personal, logistical, teaching and learning, support for learning, environmental, and advice and marketing. Findings showed that teaching and learning was the most crucial factor in deciding whether to take courses online or in-person,

followed in order by logistics, learning support, personal, advice, and marketing. Participants felt that collaborative group work was the least important factor when choosing between online and in-person courses. These findings again show that, from a student's perspective, mastery of course content is what matters most and can be facilitated—or not—by meaningful interaction with instructors and peers.

Self-Efficacy for Successful Outcomes in the Online Environment

Student self-efficacy is vital for success in any class but is more integral to success in the online environment (Alqurashi, 2018; Broadbent & Poon, 2015; Chen et al., 2016). In a longitudinal study, Brown and Park (2016) hypothesized that self-efficacy and research knowledge did not differ between students taking online vs. face-to-face courses. Two groups in a graduate social work program took courses either online or face-to-face. Both groups were tested pre/post based on the Practice Evaluation Knowledge Scale (PEKS) and the Research Self-Efficacy Scale (RSES). The authors found no significant difference in research knowledge or self-efficacy, suggesting both learning environments provided equally effective education.

Alqurashi (2018) evaluated the relationship between student satisfaction and mastery of content and factors such as learner-content interaction, online learning self-efficacy, peer relationship, and instructor-student relationship in a sample of 167 college students enrolled in an online course; successful outcomes were based on participants' self-validation and content mastery. The interaction between learner and content predicted student satisfaction while self-efficacy predicted perceived learning. Jaggers (2017) suggested that adult working students had trouble mastering complex content

without the benefit of in-person interaction. However, in his study, the least significant was the peer-interaction factor, with most participants claiming it had no bearing on their learning ability. This result, though, was not a precise comparison of online and traditional learning for the population studied, rather, these were the opinions of students who had chosen to take online courses, which could have produced selection bias in the responses.

Social Interaction and Social Presence

Studies addressing online student success focused on the socialization process in the online environment (Diep et al., 2017; Eom & Ashill, 2018; Kim et al., 2016; Sun & Chen, 2016; Vayre & Vonthron, 2018). Many experts felt socialization is necessary for students to do well and suggested that it is both the responsibility of the student and the instructor to prompt social presence and social interactions (Diep et al., 2017; Kim et al., 2016; Putulowksi & Crosby III, 2017; Richardson et al., 2017; Tseng et al., 2018). Using a sample of adult Belgium students ($N = 140$) taking online courses, Tseng et al. assessed the relationship between core self-evaluation (CSE), social interaction, and social capital as related to successful adult learning. The authors found that social capital, defined as the tangible value of social relationships in furthering a goal (such as education) and social trust, both needed for student success, were dependent on peer/instructor interaction. The results further suggested that adult students believed social interaction within the online environment was necessary for content mastery.

Informed by constructivist theory, Eom and Ashill (2018) hypothesized that the instructor's primary role under the learning model is "guide on the side" through the

support of active learning. The greater the degree of interaction in instruction implemented in the online course by the instructor, the greater level of dialogue between instructor-student and student-student would occur. The authors collected survey data from a sample ($N = 372$) from participants who had completed at least one online course. Critical success factors (CSFs) involved analyzing the quality of course design, the activities incorporated into the course by the instructor, the student's motivation, and the dialog among all online course participants. The findings showed that student motivation was high among the reasons for successful learning outcomes facilitated by the instructor's implementation of course activities. However, a negative correlation between self-regulatory learning strategies and instructor activities led the authors to believe that student self-management of online coursework was not affected by activity engagement as much as by having instructors respond more readily to concerns. The authors concluded that learning success is related to CSFs based on the engagement and interaction between instructor and student.

Also recognizing the relationship between effective online learning and social presence, Kim et al. (2016) examined the difference between interactive presence and social presence in an online class. A sample of 210 college students completed surveys that measured real-time conversation, virtual classroom engagement, and the efficiency of communication. Findings showed that social presences were related to but not capable of interactivity found within the online classroom as most participants agreed that social presence is not needed if the class fully interacts with one another. The authors concluded

that while social presence did not mediate person-to-person contact but may imply classroom communication was motivated by students' desire to succeed in the class.

Vayre and Vonthron (2018) examined the relationship between factors associated with achievement and completion of online courses and social support from instructors and other students in the class. Using such psychological factors as perceived social support, the feeling of community belonging, self-efficacy of online learning abilities, and learning engagement, the authors surveyed 506 college students enrolled in at least one online course during their collegiate years. Results suggested that students' perceptions of self-efficacy and engagement within the online environment were related to successful class outcomes; however, the feeling of belonging was not associated with success. While the need for social interaction was evident, the more common reasons for success were associated with students' academic abilities.

Studies suggest that adult students compared to younger learners conceive of learning differently, even in higher education (Diep et al., 2017; Johnson 2019; Kurucay & Inan, 2017; O'Toole & Essex, 2012). The norm for adult learning has transformed from the in-service training required for specific jobs to the online environment with more adult learners entering college through online courses. Given this new norm for adult learners, Gokcearslan and Alper (2015) asked if the locus of control and social structure of the online environment fostered a sense of community for students; locus of control (i.e., cognitive abilities, self-efficacy, learning style, self-sufficiency, and motivation) was the independent variable and dependent variables were academic success and sense of online community. The authors found that locus of control impacted both

students' sense of community and successful academic outcomes (Gokcearslan & Alper, 2015).

Other experts distinguished between online learning success attributable to students' use of socialization practices and social presence attributable to the environment and the instructor's involvement (Alsaaty et al., 2016; Bowers & Kumar, 2017; Diep et al., 2017; Kim et al., 2016; Putulowski & Crosby III, 2017; Sun & Chen, 2016). Sun and Chen (2016) examined 47 studies related to online learning practices and what processes created in the online learning environment were effective. With course technology, the fundamental understanding was a priority, and this understanding was facilitated only through the use of computer-mediated communication resources such as instant messaging, chat rooms, bulletin boards, and even inner-class emails (Sun & Chen, 2016). Results suggested that communication technologies considered to facilitate active learning were necessary for success.

Motivation and Content Mastery

The knowledge gained and retained from any course is essential to one's education. Eom and Ashill (2016) defined mastery as the extent to which a student must understand something to effectively apply the skill or knowledge in a different setting. For a student to retain content in any class, online or face-to-face, the motivation of the student must be taken into account (Bryant & Bates, 2015; Butz & Stupnisky, 2016; Eom & Ashill, 2016; Shotwell & Apigian, 2015). In the present study, the experience of online peer-peer and peer-instructor interaction will be explored with particular attention to whether or not the interaction is sufficiently meaningful to enhance mastery of complex

psychology concepts. Eom and Ashill (2016) questioned if the motivation was intrinsic for content mastery in any E-learning system. To test this, the authors hypothesized that "students with a higher level of intrinsic motivation in online courses will report higher learning outcomes" (Eom & Ashill, 2016, p. 192). Using the Motivated Strategies for Learning Questionnaire (MSLQ), the authors measured intrinsic motivation using a sample of 372 college students and found that intrinsic motivation prompts self-regulation learning strategies, which in turn increased successful learning outcomes.

Informed by self-determination theory, Butz and Stupnisky (2016) used a multi-phase, mixed-methods study to determine what levels of motivation, need satisfaction, or achievement goals were necessary for student success in an online class. Participants were students ($N = 118$) at all levels of college education and enrolled in past or present online courses and instructors ($N = 99$) either working full or part-time in the online venue; both survey and interview data were collected. Findings showed that student motivation fostered by student-instructor and peer-peer interaction were keys to succeeding in the online class.

Shotwell and Apigian (2015) examined the relationship between content mastery and students' perception of course engagement (e.g., how often students (a) visited the course, (b) interacted within the platform such as posting questions, and (c) utilized the online statistics lab) with 138 students enrolled in an online statistics course. The authors found that those students who were highly involved in the class expressed both satisfaction and knowledge of the course content, concluding that motivation and a

preference for working independently are needed to do well in online courses (Shotwell & Apigian, 2015).

Issues With Content Integration and Effectiveness of Learning

With the variety of online courses offered to college students, one concern for many instructors is content assimilation (absorbing the course's content and ideas) and how well it prompts learning in an environment that does not use face-to-face communication (Martin & Bolliger, 2018). Many experts believe content is often challenging for students to understand because when a question arises there is no immediate feedback and students may become frustrated waiting for a response via email or in-course chat (Alqurashi, 2019). The reasoning there was a need to determine why attrition rates were high in the online education population. Kebritchi et al. (2017) reviewed the literature and found the challenges for online learners dealt primarily with learner issues, instructor issues, and content issues. For example, students were prone to forget coursework due dates, were not motivated because there was no physical prompting from instructors to complete work, and instructors were difficult to contact for questions. From the instructors' perspective, transitioning from the traditional to an online modality made developing and integrating course content particularly challenging. The authors concluded that challenges to students and instructors in the online platform must be addressed to curb attrition rates.

Toven-Lindsey et al. (2015) affirmed that online education is a one-directional relationship whereby the instructors provide the content only for the online student to repeat back with no sense of learning or use of critical thinking skills was not conducive

to content mastery. Toven-Lindsey et al. (2015) examined pedagogical practices with a sample of 24 colleges offering a menu of online courses from different disciplines, including science, technology, engineering, and mathematics (STEM) fields; supplemental online teaching aids such as videos, computer graphics as well as viewable online textbook materials was used in all courses (Toven-Lindsey et al., 2015; Wladis et al., 2015). Informed by constructivist theory, Toven-Lindsey et al., the authors compared several types of analytical teaching approaches, e.g., objectivist-individual approach, the objectivist-group approach, the constructivist-individual approach, and the constructivist-group approach, and found students were less successful with the individual approach than with the group approach (Toven-Lindsey et al., 2015). Toven-Lindsey et al. (2015) believed that when instructors provided more group activities in online science-based courses, mastery of content was improved.

Broadly speaking, studies found that content integration was seriously problematic within the online environment (Alsaaty et al., 2016; Fadol et al., 2018). Often students claimed lecture material was difficult to read and comprehend, courses were often unorganized, students often complained of limited faculty access, and the infrastructure of the online environment was often confusing. The overall findings indicated older students underperformed in psychology and other social science courses when compared with counterparts in similar traditional courses. The authors suggested that this may be because the learning process in these subjects needs intensive learner-to-teacher interaction, which past literature indicates are difficult to create in an online learning environment (Alsaaty et al., 2016). That said, even with all the complaints,

students still expressed favorable opinions of the online environment due to its convenience and flexibility (Alssaty et al., 2016). Actual student performance, measured by grades, is not better or worse online compared to traditional courses (Alssaty et al., 2016).

Social Isolation and Lack of Social Interaction

Establishing social networks and problems with social isolation are aspects of the online environment related to poor success rates in online courses. The former is considered vital to any learning environment but is often a difficult concept to grasp, particularly for older, non-traditional students who were not raised in the social media era. Students who must utilize distance learning do not always have reliable internet access may have to share an internet connection, encounter poor internet connectivity or metered service, or even rely on public resources from a library. The latter, social isolation, i.e., lack of interaction with the instructor and/or peers, is a common phenomenon in online learning (Raymond et al., 2016).

To emphasize such a point, Raymond et al. (2016) examined the use of a peer-learning program (collaborative exercises) for a group of 35 2nd-year Australian nursing students taking online pharmacology courses at a rural university. The students filled out an online survey with questions ranging from understanding peer online learning, comprehension of the material, self-efficacy, and liking or disliking the environment. Feelings of isolation from peers were concerning as these nursing students believed socialization was a field-specific necessity. Participants indicated that a lag in communication between themselves and their peers was the biggest detriment to the

online format; additional problems included timeliness in connecting for communication purposes and group dynamics issues. The authors concluded that while peer learning with collaborative exercises does minimize isolation feelings, peer online learning groups were only as successful as the students involved; a sense of self-efficacy, motivation, and inclination to succeed alleviated any feelings of isolation from their peers.

The questions posed by countless experts expressed concern about comprehension and retention of content when online students do not receive feedback reliably from their peers and/or instructors (Richardson et al., 2017). Richardson et al. investigated online students' ability to learn the material when isolated from physical interaction with their peers. The authors used a sample of 40 undergraduate students, all living in remote rural areas and taking educational courses through a distance education program. The availability of resources for online environments was often poor, and most of the sample was prone to working independently. The students were interviewed at different times during one year, and the data revealed specific areas of concern including the unreliability of internet service and the lack of counseling available. Several expressed their need for collaborative learning and would meet at random times at a common location, which proved productive. The authors suggested the need for collaborative learning in any distance education class was therefore vital to academic success.

Bowers and Kumar (2017) suggested that social interaction was vital to successful outcomes within an online class. To test this, the authors examined the perceptions of online students (N = 34) versus students in a traditional college class (N = 29), *focusing on social interaction and social needs*. Results showed that students in both formats

attributed student attrition to lack of connectedness, failure to socially integrate, and lack of student interaction and/or instructor engagement. Findings showed, further, that student success in the online environment was attributable to a strong social presence and interaction with the instructor; students also favored a greater sense of overall connectedness within the classroom. Bowers and Kumar concluded that there was a clear relationship between student perceptions of socialization and personal success factors in both environments.

Chen et al. (2016) used student grades and course evaluations as measures of students' perceptions of the effectiveness of online courses with high enrollments. Students with the highest grades attributed their mastery of course content to instructor interaction; these students also wrote the most positive course evaluations. Some participants claimed that being in an online class with high numbers of students was not conducive to success because they felt a lack of instructor involvement from the instructor. The authors concluded that successful student outcomes were contingent on peer and teacher interaction in the online environment.

Relative to online learning success, Symeonides, and Childs (2015) suggested that student interaction is essential. The current study interviewed six currently enrolled online students, questioning their use of computer-mediated communication (CMC) methods within the online environment. Students said they were unable to express themselves, were more apt to compare themselves to their peers, had problems establishing peer relationships, and felt that the relaying of content was an ineffectual means for learning; their primary complaints were communication difficulties and the

lack of coping strategies in the online environment. While the authors acknowledged the limitations of a small sample, they concluded that successful outcomes in online learning courses may need to include physical tutoring availability and strategies for promoting student interaction online.

In sum, the lack of social interaction and a tendency toward social isolation can create challenges to successful outcomes for students who enroll in online courses. Students who are unable to communicate with their instructors or peers find it highly challenging to ask questions, receive answers, and overall master the content provided.

Digital Natives, Digital Immigrants

Mastery of course content, be it the traditional or online classroom in an online environment, depends on students' comfort level with the environment of the classroom itself. If the student is comfortable in a classroom that is highly engaged, with talkative peers, and an instructor who allows free-flowing conversation and debate, it is more likely, they will be successful in learning, understanding, and mastering the content (Judd & Elliot, 2017). However, if students find themselves in an online class where they are unsure or uncomfortable with the environment, they will likely not succeed (Damary et al., 2017; Judd, 2015). Students who are uncomfortable in online courses express concern not with the class content, per se, but with the technology that drives the course functions; either student may confidently engage (i.e., digital natives) or continually struggle (i.e., digital immigrants) with online class technology.

Digital natives are students who can confidently use a cell phone, tablet, or laptop computer, who understand how technology in the cyber-world of education works, but

who, counterintuitively, fail in an online class environment (Judd, 2015). Experts believe that the digital native, proficient at maneuvering around the online classroom platform had other issues that caused them to fail (Bilgic et al., 2016; Kilgour & Northcote, 2018). Digital natives who grew up and are highly comfortable in the information age where technology and social networking were and are widespread considered online courses an easy 'A' phenomenon (Stapleton, 2015; Katai, 2015). The technology prompted early distance education that many experts suggested would ensure digital natives' success in the online environment. Those students who grew up with technology and found themselves struggling with education technology, as well as the content, maybe lacking critical thinking skills (Hart et al., 2015; Kilgour & Northcote, 2018).

Other experts disagreed, claiming that digital natives may have technology skills based on their constant involvement in a cyber-lifestyle, but the minutiae of online class platforms and its inner technological working seemed to confound Millennial and Generation Z students (Katai, 2015; O'Shea et al., 2015; Uygarer et al., 2016). Attempting to explain these surprising findings, Bawa (2016) did an exhaustive review of the current literature. The author found attrition rates for digital natives included social and family issues and lack of motivation; however, many of the studies reviewed suggested that while digital natives were highly integrated into the contemporary technology lifestyle, they failed to understand education technology within the online environment. Expecting online courses to be easy, digital natives found them complicated and was the reason attributed to the high attrition rates for online courses and programs.

Kirschner and De Bruyckere (2017) explained that the advent of online education prompted an influx of students to rush into this environment thinking the coursework, and especially the exams, would be relatively easy. The authors claimed that students' expertise with laptop computers, tablets, and smartphones, was simply unhelpful in understanding the technical aspects found in an online class. In part, many experts believed the students' inability to understand the technology was more due to their lack of knowledge and experience in multitasking and juggling new information many instructors presented in the online class (Judd, 2015; Kirschner & De Bruyckere, 2017).

Often educators highly intelligent who quickly master course content but are unable to keep up because they lack any technological expertise necessary for navigating in and around an online environment (Salazar-Martinez, 2017). These 'digital immigrants,' both older and more experienced in the real working world, could instinctively relate to the content presented in lecture form where critical thinking skills were paramount to mastery of the class content (Uygarer et al., 2016). However, this same population struggled with online classroom technology. The authors explained that digital immigrants were usually older students more likely to work full or part-time, commonly married with children, or single parents. Digital immigrants, unlike digital natives, were not raised online (Salazar-Martinex, 2017). Again, counterintuitively, current studies found digital immigrants succeeded in online courses more readily than their younger peers or those digital natives who were considered technological wizards (Bawa, 2016; Salazar-Martinez, 2017; Uygarer et al., 2016).

Adult Students' Content Mastery in Traditional and Online Environments

The goal of most students taking online courses is most likely the same as those students taking a class in a traditional classroom: acquiring information for present and future utilization (Cavanaugh & Jaccquemin, 2015; Xu & Jaggars, 2014). Performance in most courses can be measured via mastery of course content, grade output, and application of the information. The retention of information is vital, and experts have wondered if such content mastery success is the same in both types of class environments.

Cavanaugh and Jacquemin (2015) compared student performance in online education environments versus face-to-face classrooms. The authors claimed that previous studies prompted mixed conclusions or often used samples too small for definitive conclusions to be drawn. To ensure sufficient data generation, the authors used a dataset of more than five thousand online courses examining mean student values for a pass or fail grades for identical courses taught both online and face-to-face across three years. The results showed little to no difference in the average number of students who did well in either class environment. The authors felt that as online education grows, the measurements for success should be grade-based outcomes, program matriculation, and attrition and course completion rates.

Xu and Jaggars (2014) explained that for students to succeed in the online environment, they must take full responsibility for their learning; students who failed had neither the discipline nor understood the responsibility that came with an online course. Most online courses require more extended study hours to grasp the material (Heller,

2018; Holmes & Reid, 2017; Hung & Chou, 2015; James, Swan, & Daston, 2016; Panigrahi, Srivastava, & Sharma, 2018; Pilkington, 2018). To better understand the reasons for this failure, Xu and Jaggars (2014) examined other elements, including the level of preparation for academic achievement, age, gender, ethnicity, and their chosen area of study. Using a dataset with over 50,000 Washington state college or university students, and tracking their achievements over five years, the authors found performance gaps in online learning for Black, male students from lower SES backgrounds. Results suggested that the performance gaps varied based on the subject area of the course itself; for example, in the social sciences such as psychology, anthropology, and philosophy and the applied professions such as law, nursing, or business, online students did not perform as well as their counterparts who took traditional, face-to-face courses.

Differences Between Younger and Older Students

There is some evidence that younger (< 25) college students learn differently than older students. These differences manifest in how each group reacts to and utilizes online learning (Uygarer et al., 2016), though older students generally perform as well as younger ones (Cavanaugh & Jacquemin, 2015). Both groups, except for much older students, could be expected to be comfortable with technology. For older students, the lack of direct personal interaction in an online setting may affect how they learn and possibly degrade the overall educational experience. Younger students, who have grown up being extremely comfortable with digital environments, may not sense such a lack (Alsaaty et al., 2016; Fadol et al., 2018; Kemp & Grieve, 2014; Lee, 2017).

Summary and Conclusions

Online education has grown exponentially over the past 20 years with more students finding it a convenient, comfortable environment for gaining higher education. The studies reviewed agreed that success in the online environment was associated with factors such as self-efficacy, social interactions, social presence, and student motivation (Barczyk et al., 2016; Diep, et al., 2016; Deming et al., 2015; Escueta et al., 2017; Jaggars & Xu, 2016; Kebritchi et al., 2017; Lowenthal et al., 2015). Experts found that perceptions of working adult students concerning the influence of online interaction and its association with content mastery were positive (Diep et al., 2017; Vayre & Vonthron, 2018). Much of the current literature concentrating on online education referenced such disciplines as nursing and business (Alsaaty et al., 2015; Chen et al., 2016; Cochran et al., 2016; Dendir, 2016; Frazer et al., 2017; Shotwell & Apigian, 2015; Raymond et al., 2016; Tseng et al., 2018). While there are online courses offered in most academic disciplines, studies that addressed social science majors, like psychology, were limited. The attitudes and perceptions of students taking online courses varied based on their course of study; however, many of the conclusions drawn by the respective researchers generalized across disciplines rather than addressing participants' discipline-specific experiences (Cho et al., 2015).

It stands to reason that online courses function differently for different degree programs. For example, a nursing or pharmacy student taking a pharmacology class online would be more prone to memorization and testing that would differ from the psychology student required to demonstrate conceptual mastery by writing application

papers (Phillips, 2015). Studies indicated that there was no correlation between student social interaction and success in the class, but there was an association between the students' social interaction and their perception of the course's quality (Alssaty et al., 2016; Jaggars & Xu, 2016). In a different study, Bailey et al. (2017) affirmed that mastery of course content is what matters most and can be facilitated—or not—by the learning environment, including the presence of absence of interactions.

Most current studies support the value of student-teacher interaction as critical to students' perceptions of content mastery (Diep et al., 2017; Hixon et al., 2016; Johnson, 2019; Kurucay & Inan, 2017; O'Toole & Essex, 2012. Also important to content mastery, in both classroom formats, is students' comfort level with the learning environment, per se. If students are comfortable in a classroom that is highly engaged, interactive, and allows free-flowing conversation and debate, they will more likely be successful in mastering the content. However, if a student finds themselves in an environment where they are unsure or uncomfortable, they are more likely not to have the necessary motivation to succeed.

Older students were found to have a stronger motivation for learning, and this motivation included learning the technology that may have stymied their learning in the beginning (Bawa, 2016; Salazar-Martinez, 2017; Uygarer et al., 2016). Despite obstacles encountered by digital immigrants related to classroom technology, studies found that older students' initial difficulties were inconsequential given their tenacity to master the technology (Damary et al., 2017; Ding & Stapleton, 2015; Judd, 2015; Judd & Elliott, 2017; Katai, 2015; Kilgour & Northcote, 2018). The majority of studies found that older

adult students had a stronger positive perception of online courses and earned better grades than their younger counterparts attributable to their ready grasp of course content related to their real-world work experience (Alqurashi, 2018; Broadbent & Poon, 2015; Butz & Stupnisky, 2016; Chen et al., 2016; Diep et al., 2017; Hixon et al., 2016; Johnson, 2019; Kurucay & Inan, 2017; O'Toole & Essex, 2012; Sun & Chen, 2016).

The positive perceptions explained through multiple studies claimed social interaction was a necessary facet for success in online courses, and the prevalence of social interaction made a difference for students in the online environment and their mastery of the course's content (Tseng et al., 2018). The overriding factor of this literature review exhibited that much of the literature and its authors concluded in generalizations of students versus specifically pointing at a population of adult working students. Chapter 3 will present the methodology, including sampling, recruiting, and data collection procedures. The role of the researcher, data analysis plan, and issues of trustworthiness will also be discussed.

Chapter 3: Research Method

The purpose of this phenomenological study was to explore the meaning of purposeful interpersonal interaction and content mastery among undergraduate working adult students taking online psychology courses. Walden University approval number for this study is 11-12-21-0187967. This chapter presents the design and rationale, role of the researcher, and methodology; I also describe recruitment, participation, data collection, and data analysis procedures followed by a discussion of trustworthiness and ethical procedures. The chapter closes with a summary.

Research Design and Rationale

Research Questions

RQ1: What is the experience of purposeful interpersonal interaction among undergraduate students taking online psychology courses?

RQ2: What is the experience of content mastery for undergraduate students taking online psychology courses?

Central Phenomenon

I explored the meaning of purposeful interpersonal interaction as it facilitated content mastery among undergraduate working students taking online psychology courses. To accommodate the changing college student demographics, more and more universities and colleges are offering online courses/programs; since 2009, the percentage of American college students over the age of 25 years has risen exponentially (O'Toole & Essex, 2012; Torres & Beier, 2018; USA Government Statistics, 2018). The changes in students' needs for easily accessible and affordable courses became a concern for

university recruitment, with some online universities accommodating the growing population of older adult students wanting to further their education (Clinefelter & Aslanian, 2016, 2017; Eom & Ashill, 2018; Kim et al., 2016). However, limited interaction with peers and instructors in online courses created barriers to full mastery of course content in certain subjects, psychology among them. Understanding how online interactive processes influence the achievement of learning outcomes may provide insight into how online learning could be enhanced.

Research Tradition

A phenomenological approach was chosen to investigate the lived experience of those who had directly experienced or been affected by the phenomenon (see Moustakas, 1994). There are three types of phenomenology: descriptive or hermeneutical, eidetic or transcendental, and genetic or constitutional (Padilla-Diaz, 2015). I used the first type, descriptive or hermeneutical, which involved the investigation of individual perspectives and entailed collecting rich detail about these perspectives as told by participants (see Padilla-Diaz, 2015). In the descriptive approach, individuals are perceived as the vehicles that provide a platform for accessing and describing the phenomenon of interest (Moustakas, 1994). Describing the essential structures of the phenomenon of interest ensures that certainty will be realized (Moustakas, 1994). Bracketing and phenomenological reduction, which were anchored on the suspension of the researcher's meanings and interpretations and openness to meaning, formed the basis of this study. After bracketing and phenomenological reduction, horizontalization was employed for purposes of preliminary grouping and listing of relevant expressions. Using the epoche

strategy, I was able to distinguish between my personal meanings and those conveyed by participants (see Moustakas, 1994). I chose Moustakas's approach because I was interested in the everyday learning experience of these students and wanted to explore the two phenomena to produce a holistic picture of their online learning experience. Because I am an online student, the process of bracketing was an essential tool in developing a trustworthy study.

Role of the Researcher

As the researcher, I was the primary research instrument, asking open-ended questions to generate narratives with participants over Google Duo face-to-face videoconferencing and telephone chosen due to limitations prompted by the COVID-19 pandemic for interviews. To ensure validity and consistency with the study, content and methodology experts reviewed the interview questions. According to Pezalla et al. (2012), the researcher's style of administering interview questions creates the space for discussion to ensue, along with participants' feelings of safety concerning the sharing of their thoughts, feelings, and experiences. As a result of my role, I adhered to the confines of the research process to ensure that I did not have personal or professional relationships with any of the participants. Because I was involved in the collection of data, I recognized the potential for research bias to affect the results. To prevent research bias from affecting results, I kept a reflexive journal in which I wrote notes, thoughts, or any information that caused biases to affect the data collection, analysis, and interpretation of the results. The use of journals allowed for self-reflection to protect against the intrusion of my preconceptions and/or prior encounters that may have biased the data collection,

analysis, and interpretation of the results (see Hughes et al., 2019). The opportunity to reflect on experiences a second or third time gave me another opportunity to consider the experiences in a different setting (e.g., a few days after data collection) to allow for the identification of bias. Further, I conducted member checking to ensure the trustworthiness of the results. Member checking is regarded as respondent validation in which the transcribed interviews are summarized and returned to participants to check for accuracy (Birt et al., 2016).

Methodology

Participant Selection Logic

Population

Because the phenomenological design works best when the sample is homogenous, all of the research participants selected were working adults age 25 to 30 with experience taking online psychology courses within the last 2 years.

Sampling Strategy

I used a multistage sampling strategy (purposive and snowball sampling) for this study. Purposive sampling is used when the intent was to focus on a specific demographic or group of individuals for participation in a study (Moustakas, 1994). If purposive sampling failed to yield a sufficient number of participants, I shifted to the snowball method whereby participants already recruited would be asked to identify others with the relevant experience who would be willing to participate. The criteria for inclusion were working adults age 25 and older who had experience taking online psychology courses within the last 2 years.

I recruited 10 participants, which was an appropriate size for qualitative interview-based inquiry because that is the point at which data saturation can be achieved (Malterud et al., 2016; Robinson, 2014). Participants were recruited from Facebook targeting specific groups and community bulletin boards at the recreation center, Food Lion, and Walmart related to students taking online courses. Flyers strategically placed at local universities and colleges were also used in the subject recruitment. If I was unable to recruit a sufficient number of participants using these methods, I used the snowball method and asked participants to refer and distribute my contact information to other people who met the inclusion criteria.

Instrumentation

The instrument adopted in the present study was consistent with Moustakas's (1994) recommendations for guided questioning and spontaneity necessary for a phenomenological study. Interviews served as the best data collection instruments for the phenomenological study because they enabled me to capture the essence of the phenomenon. In the present study, interviews were conducted virtually via Google Duo and over the phone; interviews (see Appendix A for the interview guide) took approximately 45–60 minutes and were composed of open-ended, nonleading questions (e.g., "What are your experiences with the online psychology course?" and "What are your experiences interacting with peers/instructors in a virtual platform?") Using Google Duo and the phone allowed participants to be comfortable while interviewing in a private and convenient environment.

In reference to Interview Question 1, Ortagus (2017) hypothesized that students

who enrolled in online courses due to their convenience were more likely to have positive experiences in the online environment with higher successful outcomes. With respect to the second interview question, Shotwell and Apigian (2015) noted that students who were highly involved in the class expressed both satisfaction and knowledge of the course content, concluding that motivation and a preference for working independently are needed to do well in online courses. In reference to the third interview question, Reid-Martinez and Grooms (2018) found positive outcomes for student success in online education and affirmed that this approach to learning provided the students with flexibility. In reference to the fourth interview question, Doom (2014) concluded that nontraditional students were better able to master content than their traditional counterparts in an online environment. In reference to the fifth research question, students with a higher level of intrinsic motivation in online courses will report higher learning outcomes (Eom & Ashill, 2016). With respect to the sixth research question, Kim et al. (2016) showed that social presences were related to but not capable of interactivity found within the online classroom as most participants agreed that social presence is not needed if the class fully interacts with one another. With respect to the seventh research question, for a student to retain content in any class, online or face-to-face, the motivation of the student must be taken into account (Bryant & Bates, 2015; Butz & Stupnisky, 2016; Eom & Ashill, 2016; Shotwell & Apigian, 2015). In reference to the last research question, studies suggested that adult students conceive of learning differently compared to younger learners, even in higher education (Diep et al., 2017). From the literature related to the interview questions, it was plausible to affirm that responses from the research

participants would provide insight into the lived experience of meaningful interaction and content mastery in working adult students taking online psychology courses.

Recruitment, Participation, and Data Collection

Recruitment

After approval from Walden's IRB was granted, 11-12-21-0187967, I began the recruitment phase of the study. I started by posting an invitation on private Facebook groups (e.g., Future Student Affairs Grad Students and Graduate School Alumni Association Group) to participate in the study. For those who met the inclusion criteria, I described the study's purpose and procedures; following that, I emailed participants an informed consent form, which they were asked to read and sign by indicating "I consent." Participants were advised to keep a separate copy for their records.

Participation

An initial sample of 15 participants was recruited to allow for possible attrition with the targeted number of 10–12. The consent form was emailed to the 15 research participants. The research participants were expected to read the form and sign (digitally) as a confirmation of consent to take part in the study and email back the signed form. Those who consented were informed that they could withdraw from the study at any time, their participation was strictly voluntary, and no inducements or rewards would be offered for participation. I negotiated interview dates and times with participants who met all inclusion criteria and consented to participate.

Data Collection

I conducted interviews using Google Duo, a videoconferencing interview tool, and over the telephone. The interview schedules were flexible to accommodate participants' busy lives; each interview was anticipated to take 45 to 60 minutes and was audio but not video recorded. Participants were assigned unique pseudonyms such as P1, P2, and so on. These pseudonyms protected the confidentiality of participants' identities. When interviews were completed, I provided an opportunity to debrief and ask follow-up questions, as well as review or clarify participant responses. I told the participants I would provide a link to the published dissertation if they were interested.

Data Analysis Plan

The data was analyzed using Moustakas's (1994) recommendation for phenomenological analysis of data. The first step in the data analysis process was epoche and horizontalization. For this step, every relevant expression was listed and preliminary grouping completed. This step was followed by the reduction phase that entailed testing every expression. According to Moustakas, the second step required me to determine whether the expression contained sufficient and necessary moments of the experience. Also, in this step I determined whether the expression could be labeled or abstracted. The third step was elimination, which focused on removing expressions that failed to meet the requirements established in Step 2. This step was followed by the clustering phase in which I grouped the remaining meaning units followed by application of thematic labels to the invariant constituents. The invariant constituents and their corresponding themes were then checked and compared for purposes of compatibility. Individual textual

descriptions were constructed, and a composite description of the meanings and essences of experience was developed for the research participants as a whole.

Issues of Trustworthiness

My role as the qualitative researcher was to provide strategies for ensuring not only research credibility but also the validity of the findings (see Creswell, 2014). The trustworthiness of the data was ensured by observing procedures as follows:

Credibility

Credibility is the degree to which the data are believed to be accurate and appropriately reflect the phenomenon being studied (Anney, 2014). Data saturation helped me ensure credibility as participants' responses were consistent from one participant to the next. Qualitative credibility was established by recording and transcribing the interviews verbatim and member checking (i.e., having participants check their transcribed interviews for accuracy). I also ensured credibility through the use of peer review and debriefing. Using these strategies, I was able to obtain the peer's external perspective about the research topic giving the peer the ability to challenge any assumptions I might have had. To strengthen, refine, and enhance credibility, I obtained feedback from the session through debriefing and used triangulated data, a process whereby interviews, journals, and notes were collected to enhance comprehension of the phenomenon under exploration (see Morse, 2015).

Transferability

Transferability refers to the extent to which the study's results might be applicable to other populations and settings (Anney, 2014). Transferability is not always possible

with qualitative research when the data collected consists of participants' personal experiences. Qualitative transferability was established by providing evidence that the study's findings could be applied to other situations, populations, times, and contexts. Thick description was the strategy used to achieve transferability in the current study; this referred to my efforts to provide detailed descriptions of the data collection and analysis processes. Shenton (2004) affirmed that to ensure the transferability of a qualitative study, a researcher must provide an account of all of the experiences and encounters during the data collection process. This allows future researchers not only to replicate the research process but also to understand the thought processes undertaken by the researcher; this is particularly important in qualitative research when the interpretation of data might be unavoidably subjective.

Dependability

To establish dependability, I used an audit trail to document all aspects of data collection, analysis, and interpretation processes; the audit trail was accomplished with journaling and notetaking allowing the procedural processes to be replicated by another researcher. This detailed record makes it possible to verify that my analysis and interpretations were grounded only in the data collected from participants (Golafshani, 2003). Dependability was also ensured through Shenton's (2004) recommendations, which included a reflective appraisal of the project, the operational detail of data gathering, and a detailed description of the research design and its implementation.

Confirmability

Confirmability was the extent to which the study measures or evaluates what it was intended to measure or evaluate (Anney, 2014). This was assured by creating and making available an audit trail, in addition to the reflexive journal. Ways to establish confirmability included interviewing, reflexivity, and triangulation (Anney, 2014). The reflexive journal established confirmability by allowing me to examine my reactions, beliefs, and feelings throughout the entire research process. The journal broadened my self-awareness while enhancing my objectivity regarding this study; bracketing allowed me to identify, acknowledge, and set aside any personal biases that emerged during this process. Confirmability was also ensured through Shenton's (2004) recommendations, which include triangulation, detailed methodological description, and the theoretical "audit trail" intervention.

Ethical Procedures

All documents needed to conduct this study were submitted to the IRB for approval before the study began. There were several ethical considerations when involving human subjects in research, as depicted by the Belmont Report. These considerations include respect for participants, beneficence, and justice (Yip et al., 2016). Participants were respected, cared for, and kept up to date with all information relevant to them during this study. Participants were informed that their participation was strictly voluntary and that they could withdraw at any time without penalty. This information was included in the consent form. In addition to the participants' voluntary status, participants were also assured that there was minimal risk of harm from participating in the study. I

was prepared to terminate any interview and discard the results if a participant became distressed or upset; should this have happened, participants were referred to The Haymount Institute for Psychological Services at 910-860-7008. Electronic data was stored on a password-protected computer accessible only by me. I have safeguarded all information related to this study in a locked file cabinet accessible only by me for five years after which it will be destroyed.

Summary

Chapter 3 described the proposed study's methodology. The research design and rationale, the role of the researcher, and participant selection were discussed, in addition to instrumentation, recruitment procedures, participant selection, and data collection methods. Data analysis and issues of the trustworthiness of that data were explained, as well as ethical procedures. Chapter 4 will present the study results.

Chapter 4: Results

The purpose of this phenomenological study was to explore the meaning of purposeful interpersonal interaction and content mastery among undergraduate working students taking online psychology courses. There was a need for a deeper understanding of how working adult students age 25 and older experience online psychology courses given that evidence suggested certain subjects may be difficult to master in this modality (Roehling et al., 2017). The following two research questions were used to guide this study:

RQ1: What is the experience of purposeful interpersonal interaction in undergraduate students taking online psychology courses?

RQ2: What is the experience of content mastery for undergraduate students taking online psychology courses?

Chapter 4 includes a description of the study setting, followed by a description of the participant demographics. This chapter proceeds with descriptions of the data collection and analysis procedures and a discussion of the evidence of the trustworthiness of the study results. Next, this chapter includes a detailed presentation of the study results, which are organized by research question. A summary of the results concludes this chapter.

Setting

In compliance with COVID-19 social distancing guidelines, I conducted the interviews online through the videoconference application Google Duo. The participants were asked to accept the videoconference call from a safe location where they would

have privacy and minimal distractions. The interviews were conducted on a day and at a time of each participant's choosing to ensure they had adequate time to provide detailed responses. Conducting the interviews by videoconference made the participants' facial expressions visible to me, but much of participants' body language and settings from which they took the call were not visible. Using a videoconference application as a medium for the interviews limited the amount of contextual information that could be observed, but this limitation was considered acceptable as a condition of protecting participants' health and safety through compliance with social distancing guidelines.

Demographics

The participants were a purposeful sample of 10 working adults with experience taking online psychology courses within the last 2 years. Table 1 indicates the demographic characteristics of the study participants.

Table 1

Participant Demographics

Participant	Gender	Age	Method of interaction used in online learning
P1	Female	59	Discussion boards, groups, emails, telephone calls
P2	Female	51	Discussion boards, emails, Blackboard
P3	Female	55	Emails, texting, Zoom, All Teams
P4	Female	62	Blackboard, email
P5	Female	27	Discussion boards
P6	Female	30	Email, discussion boards, Canvas
P7	Male	59	Discussion boards, Zoom, Microsoft Teams, emails
P8	Male	35	Zoom, emails, discussion boards
P9	Female	45	Zoom, emails, discussion boards
P10	Male	50	Zoom, emails, texting

Seven of the 10 participants (70%) were female. The remaining three participants (30%) were male. Participants' average age was 47.3 years, ranging from a minimum of 27 years to a maximum of 62 years. The most frequently used methods for interacting in online courses were email (reported by eight participants), discussion boards (seven participants), and Zoom (five participants). The participants specified that discussion boards or videoconference applications such as Zoom were the media typically used for interacting with classmates and that email, text message, and telephone were typically used to interact with instructors.

Data Collection

A single one-to-one semi structured interview was conducted with each of the 10 participants. The interviews were conducted online through the videoconference

application Google Duo and were audio recorded using the application's integrated audio-recording feature. The duration of the interviews ranged from 45 to 60 minutes. There were no deviations from the planned data collection procedure described in Chapter 3, and no unexpected circumstances occurred.

Data Analysis

The audio-recorded interviews were transcribed verbatim and verified by me by listening to the recordings while reading and rereading the transcripts and making corrections as needed. The transcripts were de-identified during transcription to protect the confidentiality of participants' identities, replacing their real names with alphanumeric codes (P1, P2, and so on) and removing personal identifiable information. A summary of each transcript was emailed to each participant with a request that they verify its accuracy or recommend corrections to my interpretations (i.e., member checking). Participants recommended no corrections. The transcripts were imported as source files into NVivo 12 computer-assisted qualitative data analysis software for analysis.

The transcripts were analyzed using the modified Stevick-Colaizzi-Keen method (see Moustakas, 1994). Before data collection, I was able to practice epoche in which I self-reflected my experiences related to taking online courses. This enabled me to relinquish any biases or judgments and have a fresh perspective when looking at the data (see Moustakas, 1994). I conducted this step to increase credibility and control bias by reflecting on my experiences with the meaning of purposeful interpersonal interaction and content mastery. Also, journaling throughout the process made my biases explicit.

Bracketing was also achieved by reflecting on my experiences before I began the interview process; to that end, I answered the interview questions so I could recall and set aside any personal biases before I began the interview process.

In Step 1, the data were horizontalized, meaning that every statement relevant to participants' purposeful interpersonal interaction and content mastery in online psychology courses was listed; all statements were treated as equally relevant, pending further analysis. The statements were listed by assigning every relevant phrase or group of phrases to an NVivo node. Statements with similar meanings were assigned to the same node for preliminary inductive grouping. This study was conducted to explore the meaning of purposeful interpersonal interaction and content mastery among undergraduate working students taking online psychology courses using the qualitative research method grounded in phenomenology.

In Step 2, the phenomenological reduction process, the initial step is horizontalization (Moustakas, 1994). During this process, I transcribed each participant's experience verbatim and with equal importance. Each of the statements listed in the first step was reviewed to assess whether it was a necessary and sufficient description of a participant's purposeful interpersonal interaction and content mastery in online psychology courses. Statements that did not contain sufficient information to be meaningful when abstracted from their contexts in the original transcripts, or statements that could not be labeled with third-person language indicating a more generalized meaning applicable across multiple participants' experiences, were eliminated. The remaining statements were identified as the invariant constituents of the phenomenon

under exploration. A total of 83 invariant constituents were identified and grouped into 15 initial clusters or codes, which were labeled using descriptive third-person language to indicate their general significance. Table 2 indicates the initial codes and the number of participants who contributed to them.

Table 2

Initial Codes

Initial code	Sample quote
Clear course design contributed to content mastery	"Course design played a major role. Everything was spelled out and I didn't have to guess what I was supposed to do. I feel it contributed heavily to the content mastery" (P8).
Conflicts occurred during peer discussions	"The peer interactions amongst the students were very vocal, and some were aggressive" (P3).
Engaged peers contributed to satisfaction with online learning	"Throughout a few of my online psychology courses, I experienced a couple of slackers that simply agreed to whatever" (P10).
Group projects contributed to content mastery	"The group exercises and projects were instrumental with helping to process the course content in a forum with peers" (P1).
High instructor responsiveness made students feel cared for	"When my instructor finally emailed me back, he was very insensitive to me sharing that I was hospitalized" (P3).
Instructor interaction contributed to content mastery	"An answered question of clarification of a rubric assignment through Canvas was an interaction that improved my understanding of an online psychology course" (P6).
Instructor responses were sometimes delayed	"I have received some very late responses to questions that I thought should have been answered a bit earlier—questions about an assignment that was due" (P2).
Instructor was flexible when contacted	"He was flexible with due dates as long as you communicated your progress to him and continued to routinely turn in assignments" (P4).
Lack of instructor responsiveness	"I took a psychology class once where the instructor was terrible with interactions. He would take forever to give a response to questions" (P8).
Nonjudgmental instructor interactions were positive	"My online experience was satisfactory for me because the instructor made it very comfortable for me to express my thoughts without judgment" (P1).
Peer interaction contributed to content mastery	"Discussion boards have been a way to help me comprehend the material . . . It helped me think about the material in a new way" (P5).
Peer interaction was a positive element of the online coursework experience	"I had two or three of my peers on Zoom for a study group and was able to include my instructor, if me or my peers had questions, concerns, or suggestions" (P7).
Peer interaction was through discussion boards	"The discussion boards, groups, emails, and telephone calls have been instrumental with supporting my online experience" (P1).
Satisfactory instructor responsiveness	"I have never taken a psychology course where I didn't receive a response" (P9).

In Step 3, the imaginative variation process consists of examining alternatives, testing possibilities, and envisioning many different meanings (Moustakas, 1994). Certain elements were used to develop themes that described participants' experiences (textural description; see Creswell, 2007). To capture individual textural descriptions, I selected verbatim responses that came directly from the participants during the interviews. This step also involved clustering the invariant constituent codes and labeling them thematically (see Moustakas, 1994). Codes were clustered when they were related as different aspects of the same broader idea. For example, the following four codes were clustered: (a) conflicts occurred during peer discussions, (b) engaged peers contributed to satisfaction with online learning, (c) peer interaction was a positive element of the online coursework experience, and (d) peer interaction was through discussion boards. These four codes were identified as related because they all included data relevant to peer interactions in participants' online psychology classes. A second thematic cluster comprised the six codes that referred to participants' interactions with their instructors, and a third thematic cluster comprised the five codes that referred to content mastery. Thus, the 15 initial codes were clustered into three themes, as indicated in Table 3.

Table 3

Clustering of Codes to Form Themes

Theme Initial code clustered to form theme	*n* of participants contributing (*N*=10)	*n* of transcript excerpts included
Theme 1. Instructor responsiveness was associated with positive student experiences of online learning	10	25
High instructor responsiveness made students feel cared for		
Instructor responses were sometimes delayed		
Instructor was flexible when contacted		
Lack of instructor responsiveness		
Nonjudgmental instructor interactions were positive		
Satisfactory instructor responsiveness		
Theme 2. High peer engagement was associated with positive student experiences of online learning	10	24
Discrepant data – Conflicts occurred during peer discussions		
Engaged peers contributed to satisfaction with online learning		
Peer interaction was a positive element of the online coursework experience		
Peer interaction was through discussion boards		
Theme 3. Clear course design and instructor and peer interactions contributed to content mastery	10	27
Peer interaction contributed to content mastery		
Group projects contributed to content mastery		
Instructor interaction contributed to content mastery		

In Step 4, I was able to develop a description that represented the essence of the phenomenon by using structural and textural descriptions. This is the last step of the modified Stevick-Colaizzi-Keen method (Moustakas, 1994). To explore what happened to the participants, I used textural descriptions, and to discover how participants experienced the meaning of purposeful interpersonal interaction and content mastery, I used structural description. The process consisted of reviewing both the textural and structural descriptions and organizing them into clusters. The next step was to bracket each cluster from the textural and structural descriptions. Once validated and verified, I categorized the clusters into themes.

Evidence of Trustworthiness

Credibility

Credibility is the degree to which the data is believed to accurately reflect the phenomena being studied (Anney, 2014). Qualitative credibility was established by recording and transcribing the interviews verbatim and by member checking, i.e., having participants check my summaries of their interviews for accuracy. Credibility was also ensured through peer review and debriefing. Peers' perspectives about the research topic were discussed to identify potential researcher preconceptions and biases. The use of a reflexive journal, in which I noted my reactions throughout both the interview and analysis process, allowed me to identify and set aside (i.e., bracket) any biases, preconceptions, opinions, or feelings about my own experience taking online psychology courses; this was necessary to ensure that my findings were not tainted. Using the journal helped me to isolate and, thereby, set aside my thought process and focus instead on the

essence of the participants' experiences through the flow of their conversations, emotions, and tone (Berger, 2015; Shenton, 2004).

Transferability

Transferability is the extent to which a study's results are applicable to other populations and settings (Anney, 2014). Thick description has been used to support readers' assessments of transferability, by providing detailed descriptions of the data that include quotes from the data as evidence for all findings. Shenton (2004) affirmed that to ensure the transferability of a qualitative study, a researcher should convey information about the contexts and perspectives from which the data were collected. Thick descriptions that include participants' own words help to convey to the reader the perspectives from which participants were speaking. The description of the sample demographics in this chapter will also contribute to readers' ability to assess transferability to specific populations and settings of interest.

Dependability

Dependability is the extent to which the integrity of study procedures is verifiable (Anney, 2014). To establish dependability, an audit trail was created to document all aspects of data collection, analysis, and interpretation processes. The audit trail was created through journaling and notetaking to facilitate replication of the study by future researchers. This detailed record makes it possible to verify that the analysis and interpretations are grounded only in the data collected from participants (Golafshani, 2003). Dependability was also strengthened through Shenton's (2004) recommendations, which included a reflective appraisal of the project, the operational details of data

gathering, and a detailed description of the research design and its implementation, as presented in Chapter 3 and in the present chapter.

Confirmability

Confirmability is the extent to which the findings represent participants' opinions and experiences rather than researcher bias (Anney, 2014). Confirmability was strengthened by creating and making available an audit trail in addition to the reflexive journal. The reflexive journal contributed to establishing confirmability by allowing examination of researcher reactions, beliefs, and feelings throughout the research process. Bracketing was also conducted -to allow for the identification, acknowledgement, and setting-aside of researcher biases.

Results

The textural-structural descriptions represented the themes that resulted from the 10 participant interviews. To accomplish the data analysis process, Moustakas' (1994) modified Stevick-Colaizzi-Keen method was used. This presentation of the study results is organized by research question and within research question by theme. Each theme was reviewed to determine which of the two research questions it addressed. Table 4 indicates how the themes were used to address the research questions.

Table 4

Themes Used to Address Research Questions

Research question	Theme(s) used to address question
RQ1: What is the experience of purposeful interpersonal interaction in undergraduate students taking online psychology courses?	Theme 1. Instructor responsiveness was associated with positive student experiences of online learning Theme 2. High peer engagement was associated with positive student experiences of online learning
RQ2: What is the experience of content mastery for undergraduate students taking online psychology courses?	Theme 3. Clear course design and instructor and peer interactions contributed to content mastery

RQ1: What Is the Experience of Purposeful Interpersonal Interaction in Undergraduate Students Taking Online Psychology Courses?

Two of the themes identified during data analysis were used to address this question. The two themes were: (Theme 1) instructor responsiveness was associated with positive student experiences of online learning, and (Theme 2) high peer engagement was associated with positive student experiences of online learning. The following two subsections are more detailed presentations of these themes.

Theme 1: Instructor Responsiveness Was Associated With Positive Student Experiences of Online Learning

Interviews from all 10 participants contributed to this theme. The participants referred to their instructors' responsiveness as the instructor factor most closely associated with their overall level of satisfaction with online learning. Instructor responsiveness referred to how quickly instructors responded to participants' communications requesting assistance, guidance, or feedback. When participants'

instructors responded quickly, relevantly, and nonjudgmentally to such communications, participants reported that they were highly satisfied with the interaction. When instructors responded tardily or not at all to requests for assistance, the participants reported low levels of satisfaction with instructor interactions.

The participants reported different levels of instructor responsiveness. Three participants reported that their instructors consistently responded quickly to their communications. P9 reported a high level of satisfaction with instructor interactions because, "I have never taken a psychology course where I didn't receive a response." P4 reported a high level of satisfaction because she experienced only one instance in which an instructor did not respond promptly to her communication and the instructor later apologized and provided a reason:

> Normally he was prompt with responding, but one time he hadn't responded in a timely manner, and I called his office to see if he had received the email with my question. He had been ill and apologized for not responding in a timely manner.

P4 added that her instructor's responsiveness contributed to her satisfaction by enabling her to master the course content and feel confident that she had done so: "Being able to 99% reach the instructor for clarity at any given time . . . helped my confidence that I was, in fact, properly grasping the course material." P1 reported a high level of satisfaction with instructor interaction in her online psychology courses because her instructors responded relevantly when she requested feedback: "Fortunately, all of my online instructors were able to provide quality, informative feedback when needed."

Three participants reported that their instructors typically provided timely responses, but that on some occasions, responses were significantly delayed for no apparent reason. These participants were satisfied overall with their interactions with their instructors but believed their experience would have been better if their teachers had been more consistently responsive. P2 indicated that sometimes her urgent questions went unanswered for an excessively long time: "I don't have any examples where an instructor didn't answer a question. However, I have received some very late responses to questions that I thought should have been answered a bit earlier—questions about an assignment that was due." Using similar language to P2's, P10 reported only moderate satisfaction with instructor interactions because, "I received some very late responses."

Four participants described themselves as dissatisfied with instructor interaction because their professors were unresponsive. P8 described an instructor as routinely delaying responses to his communications: "I took a psychology class once where the instructor was terrible with interactions. He would take forever to give a response to questions, so I had to reach out to a peer to get their interpretation of the answers." P6 said of instructor responsiveness, "This did not happen with any of my online instructors." P3 reported low satisfaction because repeated communications to a professor about an urgent matter elicited no response. When she finally reached the instructor through a guidance counselor, his response was unapologetic:

> I emailed my online psychology instructor a few times inquiring about a make-up test due to being sick that led me to the hospital, where I could not take the test. After receiving no response from my instructor, I reached out to my guidance

> counselor for help because I did not want my GPA to be affected by missing a very important test. When my instructor finally emailed me back, he was very insensitive to me sharing that I was hospitalized.

In addition to indicating that the timeliness of instructor responses was associated with their overall satisfaction with their online courses, some participants also noted their appreciation for instructor responses that were nonjudgmental and expressed reasonable flexibility regarding requirements such as deadlines. P1 described the instructor's nonjudgmental interactions as contributing to a safe and open online learning environment in which opinions could be expressed freely:

> My online experience was satisfactory for me because the instructor made it very comfortable for me to express my thoughts without judgment. During the learning process it can be intimidating to disclose information with complete confidence. Most of my instructors created an environment that was conducive to discussions safe, open discussions.

Two participants stated that their instructor's reasonable flexibility contributed to their overall satisfaction with the online courses. P4 said of her instructor, "He was flexible with due dates as long as you communicated your progress to him and continued to routinely turn in assignments," a form of instructor responsiveness to her needs that she considered fair and satisfactory. P2 appreciated that her instructor was flexible enough not to give her a failing grade when her uncertainty about citation requirements led to noncompliance:

> When I was unsure about referencing of an assignment that I submitted, such as the APA style, margins, [and] plagiarism checker, instead of failing me, he provided me with advice and guidance to help me to further research and correct the information in order to get a better grade.

In summary, participants whose instructors consistently provided timely responses to their communications requesting guidance, feedback, or assistance expressed the highest level of satisfaction with instructor interactions in their online psychology courses. Participants whose instructors usually gave timely responses, but who on some occasions gave very late responses without explanation, expressed satisfaction overall, but at a lower level than participants whose instructors consistently responded quickly. The participants who expressed the lowest level of satisfaction with instructor interaction had professors who routinely failed to respond or responded late. Other features of instructor interactions that some participants described positively included being nonjudgmental and reasonably flexible.

Theme 2: High Peer Engagement Was Associated With Positive Student Experiences of Online Learning

All 10 participants contributed to this theme. The participants described peer interactions via discussion boards or videoconference as a positive aspect of their online psychology classes. The characteristic of peer interactions that participants referenced as influencing their satisfaction was peer engagement. Participants described their peers as engaged when they took the time to respond in detail and depth to discussion board posts or other peer-to-peer communications. Longer, more detailed peer contributions to class

discussions were positive, participants said, because they indicated effort and provided a sufficient amount of material to stimulate further discussion. When peers were not engaged, as when they made only brief contributions to class discussions or responded only by expressing unqualified agreement with their peers' posts, participants experienced a lower level of satisfaction.

Almost all participants described peer interactions through class discussions as contributing to their learning in and satisfaction with online psychology courses. P7 engaged in class discussions via Zoom, and he reported that peer interaction contributed to his success in the course:

> I had two or three of my peers on Zoom for a study group and was able to include my instructor, if me or my peers had questions, concerns, or suggestions. Due to the online study group, I was successful in receiving an "A" on all of my tests.

P1 corroborated P7's response in describing peer interaction as "instrumental" in her learning: "The discussion boards, groups, emails, and telephone calls have been instrumental with supporting my online experience." P5 enjoyed class discussions via discussion boards because they enabled her to learn more about her classmates than an in-person setting would have allowed, a potential advantage of online learning over in-person learning:

> I enjoy the discussion boards that are usually required in online classes. I find them especially enjoyable if they require a personal opinion or experience. You can learn so much more about classmates that you wouldn't be able to learn in an in person setting because there wouldn't be time for everyone to share.

In describing the characteristics of peer interaction that contributed most to their enjoyment of and success in their online psychology courses, participants referred to a high level of peer engagement in the form of taking the time to offer detailed responses. P4 said that posts of at least a few sentences or a paragraph contributed effectively to her enjoyment of and success in the course:

> I probably remember most in reading some of my peers' discussion of the course material that several people commented with just a few words, while others would write a paragraph with many more details in their answers. Discussions taking place on Blackboard were helpful as long as enough people really participated with at least a couple sentences or a paragraph.

P10 expressed a perception similar to P4's, saying that peer engagement was unsatisfactory when classmates gave brief responses that merely registered agreement with previous posts: "Throughout a few of my online psychology courses, I experienced a couple of slackers that simply agreed to whatever. They just logged into the chatroom breakout sessions just to say they were there but offered little participation."

Four participants provided partially discrepant data describing experiences of a high level of peer engagement that was not helpful. P1 referred to a peer whose participation was not helpful because they made inappropriate remarks: "There was a time when a student engaged in a discussion that was sexually inappropriate and he had to be reminded of the respect and boundaries that were required for adult conversations in the online platform." P3 described unhelpful peer engagement as "aggressive" and "heated" in a Psychology of Religion course: "The peer interactions amongst the students

were very vocal, and some were aggressive . . . At times conversations became slightly heated." P4 described peer engagement as unhelpful when it diverged too far from her own contributions: "There were occasions when the participation of my peers wasn't very helpful, and in fact their discussion went in a completely different way than mine did."

In summary, the participants reported that peer interactions were usually helpful in increasing their enjoyment of and success in their online psychology courses. Peer interaction was described as helpful when peers were engaged enough to contribute detailed responses to discussions rather than providing brief responses that only expressed agreement with previous posts. However, some participants provided partly discrepant data describing instances in which high peer engagement was not helpful. Peer engagement was described as unhelpful when it was inappropriate, aggressive, or tangential to the participant's contributions.

RQ2: What Is the Experience of Content Mastery for Undergraduate Students Taking Online Psychology Courses?

Theme 3 captured the essence of participant responses to RQ2: clear course design and instructor and peer interactions contributed to content mastery. The following subsection is a more detailed presentation of this theme.

Theme 3: Clear Course Design and Instructor and Peer Interactions Contributed to Content Mastery

All 10 participants contributed to this theme. Course design was described as contributing to content mastery when it was clear and when expectations and goals were explained in detail. As Theme 1 indicated, instructor interactions contributed to content

mastery when instructors were responsive. Theme 3 added to the Theme 1 findings, indicating that instructor responses aided content mastery when they involved explanation of content or expectations for which participants had questions. Similar to Theme 1, Theme 2 indicated that peer interaction contributed to content mastery, contributing most to content mastery when they provided explanation or guidance to the participants.

Six of the participants reported that clear, detailed course design plans contributed to their ability to master the course content. P8 described a high level of detail and lack of ambiguity in the course design as contributing to his ability to master the content: "Course design played a major role. Everything was spelled out and I didn't have to guess what I was supposed to do. I feel it contributed heavily to the content mastery." P9 described the course design as helpful because it included clear expectations for students' work and participation: "Course design is very important and made a big contribution to content mastery by helping me to understand what I needed to do to make a good grade." P6 also spoke positively about an instructor who issued clear expectations for student work: "The instructor was very thorough [and] gave specific rubrics for assignments."

Six participants reported that instructor explanations in response to their questions contributed to their ability to master the course content. P6 described an instance when she requested clarification of expectations for student work and received a response that contributed to her content mastery: "An answered question of clarification of a rubric assignment through Canvas was an interaction that improved my understanding of an online psychology course." P8 reported the experience of receiving a helpful explanation

during a Zoom call with an instructor: “I had a Zoom call with my instructor where he explained the material I was unsure about.” P10 reported an experience similar to P8’s but involving multiple instances in which the instructor provided clarification via Zoom: “I have to say Zoom calls with my instructor improved my understanding of the course content.”

Six participants reported that interactions with their peers contributed to their ability to master the content when their peers provided explanation or guidance. P3 had meetings with individual peers to request clarification of course content: “I met one-to-one with some of the younger students and asked for some help in maneuvering around to better understand the course content.” P5 described peer contributions to discussion boards as contributing to her understanding of the course content by exposing her to a range of different perspectives:

> Discussion boards have been a way to help me comprehend the material. Reading through the discussion boards showed me that my peers had different understandings and conclusions about the same material. It helped me think about the material in a new way.

P7 described an online study group with peers as helping him to master the course content: “My example of interaction with my peers would be the study group each week to discuss each of our understandings of the contents. Due to this study group, I was successful in getting an A.” Two participants also described peer interaction as helpful when it occurred during group project work. In a representative response, P1 explained that group projects were helpful in developing her understanding of the course content

independently of the instructor's input: "The group exercises and projects were instrumental with helping to process the course content in a forum with peers. This platform is effective for processing the information independently without direct immediate input from the instructor."

In summary, participants described course designs as increasing their ability to master the content when they included clear, detailed plans for the course and expectations for student work and participation. Instructor interactions contributed to content mastery when the instructor responded to student requests for explanations of content or expectations. Peer interaction contributed to participants' ability to master the content when peers provided guidance or a variety of perspectives.

Summary

Two research questions were used to guide this study. RQ1 was: What is the experience of purposeful interpersonal interaction in undergraduate students taking online psychology courses? Two themes emerged to address this question. The first was *instructor responsiveness was associated with positive student experiences of online learning*. Participants expressed the highest level of satisfaction with courses in which the instructor provided timely responses to their communications requesting guidance, feedback, or assistance. Participants whose instructors usually but not always gave timely responses expressed a somewhat lower level of satisfaction but described themselves as satisfied overall. Participants whose instructors consistently delayed or did not provide responses expressed dissatisfaction.

The second theme responsive to RQ1 was *high peer engagement was associated with positive student experiences of online learning*. Peer interactions were usually helpful in increasing participants' enjoyment of and success in their online psychology courses. Peer interaction was helpful when peers contributed detailed responses. However, peer engagement was not helpful when it was inappropriate, aggressive, or irrelevant to the class discussion.

RQ2 was: What is the experience of content mastery for undergraduate students taking online psychology courses? The theme that emerged to address this RQ was *clear course design and instructor and peer interactions contributed to content mastery.* Course designs were experienced by participants' in mastery of content when clear, detailed plans and expectations were included. Instructor interactions contributed to experience of content mastery when the instructor responded to student questions with explanations of content or expectations. Peer interaction contributed to participants' ability to master the content when peers provided guidance or a variety of perspectives. Chapter 5 will present an interpretation of the findings, limitations, recommendations, and implications for positive social change.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this phenomenological study was to explore the meaning of purposeful interpersonal interaction and content mastery among the undergraduate working students taking online psychology courses. There was a need for a deeper understanding of how working adult students aged 25 years and older experience online psychology courses given the evidence that suggested certain subjects may be difficult to master in the online modality (see Roehling et al., 2017). To recruit participants, I used purposive sampling and snowball sampling. Qualitative interviews were conducted with a purposeful sample of 10 working adults who had taken online psychology courses within the last 2 years. Purposive sampling is used when the intent is to focus on a specific demographic or group of individuals with firsthand experience of the phenomenon under study (Moustakas, 1994). Study participants were recruited from Facebook, targeting specific groups and community bulletin boards at the recreation center, Food Lion, and Walmart. Data analysis for this study was conducted using Moustakas's (1994) recommendation for a descriptive phenomenological analysis.

Summary of Key Findings

Findings indicated that instructor responsiveness was associated with positive student experiences of online learning; participants whose instructors provided timely feedback, responses, and assistance expressed the highest level of satisfaction with their instructor interactions. Conversely, lack of consistent instructor feedback led to lower satisfaction levels among students taking online psychology courses. Furthermore, high peer engagement was associated with positive student experiences; participants reported

that peer interactions were usually helpful in increasing their enjoyment of and success in their online psychology courses.

However, some participants mentioned instances in which peer engagement was not helpful. Peer engagement was described as unhelpful when inappropriate, aggressive, or tangential to the participant's contributions. Findings also revealed that clear course design and instructor and peer interactions contributed to content mastery. Participants described course designs as increasing their ability to master the content when clear, detailed plans for the course were used.

Interpretation of the Findings

Research Question1

Theme 1: Instructor Responsiveness Was Associated With Positive Student Experiences of Online Learning

Participants described their instructors' responsiveness as the factor associated most closely with their overall level of satisfaction with online learning. When instructors responded quickly, relevantly, and nonjudgmentally to their communications, participants were highly motivated and satisfied with the online learning interactions. However, instructors' failure to respond quickly to students' requests for assistance reduced both motivation and satisfaction levels. Consistent with present study findings, Jaggars and Xu (2016) examined students' perceptions in the online learning environment. The study addressed whether interpersonal interaction made a difference in students' perceived quality of online coursework. Using a sample of 678 online students, Jaggars and Xu found that students' social interactions were positively related to both perceived course

quality and course mastery such that quality and mastery increased with students' social interactions. The current findings also corroborated those of Ortagus (2017) who hypothesized that students enrolled in online courses were more likely to have positive experiences and successful outcomes when instructors were more interactive in providing timely feedback to students.

In the context of online learning for adults, the current study finding supported the previous literature that adults learn differently from younger people and their motivation levels are different (see Knowles, 1978). In this regard, Yarbrough (2018) used adult learning theory to craft a model for adults in an online platform, arguing that online instructions administered to adults must be designed to meet their unique learning styles, which differ from traditional younger students. The need for instructor interaction and feedback was also emphasized by Diep et al. (2019) who agreed that online learning instructions for adults must be crafted toward goal orientation and a curriculum focused on practice, such as feedback communication, rather than formal models. Aligned with these findings, participants in the current study reported high levels of satisfaction when instructor interaction was prompt and clear.

Participants also reported higher levels of satisfaction when their online instructors were nonjudgmental and reasonably flexible with requirement deadlines and schedule changes. Participants also appreciated instructor apologies for late replies to their requests for information and/or clarification. These findings supported Van Doom and Van Doom's (2014) results, indicating that nontraditional students preferred flexible class schedules and working without experiencing any judgment for their choice. Nguyen

(2015) extended Van Doom and Van Doom's findings and sought to find evidence that online learning was just as effective as face-to-face courses. Findings showed that for higher education, successful outcomes were based on presentation of material, course comprehension, class interaction online with instructors' flexible requirements, message boards, and student self-efficacy associated with a motivation to succeed (Nguyen, 2015).

Theme 2: High Engagement Was Associated With Positive Student Experiences of Online Learning

Characterized as peer engagement, participants reported that peer interactions through discussion boards or videoconferences were a positive aspect of their online psychology classes. The longer and more detailed peer contributions to class discussion provided more materials and sufficient knowledge to stimulate the discussion. Lack of peer discussion or expressing unconditional agreement with their peers' posts led to a lower level of satisfaction as did inappropriate remarks by peers during peer interaction. All participants described peer interactions via class discussion as contributing to their learning and satisfaction with the online psychology courses.

In a related study, Raymond et al. (2016) found that a lag in communication between students and their peers (e.g., timeliness in connecting for communication purposes in group dynamics) was detrimental to the online learning experience, and noted that peer online learning groups were only as successful as the students involved. Other studies indicated that online students expressed concern about comprehension and retention of course content when they did not receive reliable feedback from their peers

or instructors, but that satisfaction increased when meeting with peers online to discuss course materials (Richardson et al., 2017).

Research Question 2

Theme 3: Clear Course Design and Instructor/Peer Interactions Contributed to Content Mastery

Participants responded that course design contributed to content mastery when it was clear and when the course expectations, goals, and content were explained in detail. Also reflected in Theme 1, participants' responses indicated that instructor responsiveness, especially when instructor responses included explanations of content or course expectations, increased content mastery. Theme 2 results indicated that online peer interactions contributed to content mastery in online psychology courses. Theme 3 corroborated Theme 2 results that peer interactions contributed to content mastery when providing clear explanations and guidance about the course content in psychology.

Peer engagement through interactive group discussions also contributed to students' ability to master course content when peers provided clear explanations or guidance. Course designs increased the ability to master psychology concepts when clear, detailed plans for the course and expectations for students' work and their participation were included. Findings from the current study supported the previous literature. For instance, Eom and Ashill (2016) defined mastery as the extent to which a student must understand subject content and effectively apply that knowledge in a different setting. Using self-determination theory, Butz and Stupnisky (2016) examined students' level of motivation and satisfaction and whether explicit achievement goals were necessary for

student success in an online class. The study included a sample of 118 college students who had been enrolled in or were enrolled in online courses with 99 instructors working either full- or part-time. Butz and Stupnisky reported that students' motivation, fostered by student–instructor and peer–peer interaction, was vital for mastery of online course classes.

Further, Shotwell and Apigian (2015) examined the relationship between content mastery and students' perceptions of coursework management, such as how often students visited the course and interacted within the platform (e.g., posting questions). Using a sample of 138 students who had been enrolled in an online statistics course, Shotwell and Apigian established that students highly involved in online classes had both mastered and were satisfied with the course content, especially students who had engaged with peers and preferred working independently. However, Alsaaty et al. (2016) and Fadol et al. (2018) found that students often claimed study materials were difficult to read and understand, courses were in most cases unorganized, and faculty access was limited. Supporting findings from these three studies, findings from the present study indicated that participants mastered complex concepts and were satisfied with their online courses when they engaged in productive discussions and when course design and expectations were detailed and clear.

Theoretical Foundation

Constructivism

Constructivist learning environments allow learners to build their meaning and understanding from learning resources and the construction of their knowledge harbored

in the understanding of surrounding societal environments (Hong, 2003). Constructivists claim that learners accumulate new knowledge by themselves and use this to build on the foundation acquired from previous knowledge and experience. Social constructivism highlights the significance of culture and social context. The constructivist theory identifies the following as the major factors influencing knowledge acquisition in a learning environment and the resulting experiences: (a) isolation, (b) student-centered learning, (c) instructor's role, (d) authentic learning, (e) collaborative learning conflicts, and (f) students' assessments. This section includes a discussion of the application of constructivist perspectives: (a) interactive learning, (b) student-centered learning, (c) facilitating learning, (d) authentic learning, and (e) collaborative learning. Constructivist learning environments provide collaborative construction of knowledge through social negotiation, not a competition among learners for recognition. Both Piaget (1971) and Vygotsky (1978) underscored the significance of social interactions. However, Vygotsky saw social interactions leading to individual cognitive development.

According to constructivist theory, students learn best through active engagement with others in their environment (Vygotsky, 1978). Instead of instructors imparting all of their knowledge to the learners, the teacher assumes the role of facilitator, guiding and supporting the learners as they construct their knowledge of the world by interacting with others (Vygotsky, 1978). Current study findings indicated that productive social interactions between instructors and students in the online learning environment motivated students to master course content. Constructivist theory explains the adult style of learning based on the online instructor as a facilitator who monitors a positive learning

environment, providing the supporting skills and knowledge to each individual student (Hong, 2003). For example, P4 stated that her instructor's responsiveness contributed to her satisfaction by enabling her to master the course content and feel confident that she had done so: "Being able to 99% reach the instructor for clarity at any given time . . . helped my confidence that I was, in fact, properly grasping the course material." P1 reported a high level of satisfaction with instructor interaction in her online psychology courses because her instructors responded relevantly when she requested feedback: "Fortunately, all of my online instructors were able to provide quality, informative feedback when needed."

Findings indicated that by interacting with and getting help from more knowledgeable peers, students developed a more profound comprehension of complex concepts than their individual capacities would allow, supporting constructivist claims that students learn best when they actively construct their understanding through social interaction. These results suggested that student–instructor interactions, if well managed, can improve students' satisfaction with online learning and overall positive experiences. P1 stated

> my online experience was satisfactory for me because the instructor made it very comfortable for me to express my thoughts without judgement. During the learning process it can be intimidating to disclose information with complete confidence. Most of my instructors created an environment that was conducive to discussions safe, open discussions.

Adult Learning Theory

Adult learning theory (andragogy), developed by Knowles in 1968, explains how adults learn and how that learning is different from how children learn. In practical terms, andragogy suggests that instruction for adults needs to focus more on the process and less on the content being taught. Strategies such as case studies, role playing, simulations, and self-evaluation are most useful. Instructors adopt a role of facilitator or resource rather than lecturer or grader. The theory suggests that adults want to be involved and in control of how, what, and when they learn. Adults can draw on what is previously known and pull from previous experiences to provide greater context to the learning process. To problem solve, adults use reasoning to make sense of new information rather than simply memorizing and storing facts (Knowles, 1973). Adults need information that is applicable and can be implemented to their lives immediately (Smith, 2002).

Findings from the current study supported adult learning theory by establishing the self-directed nature of adult learning whereby the learning process should allow students to discover things for themselves with instructor guidance and help when mistakes are made. For example, P1 stated

> my online experience was satisfactory for me because the instructor made it very comfortable for me to express my thoughts without judgement. During the learning process it can be intimidating to disclose information with complete confidence. Most of my instructors created an environment that was conducive to discussions safe, open discussions.

Additionally, the theory is based on the premise that adult learning is student centered, commonly known as active learning such that students are directly involved in the learning process, including course design, instruction methods preparation, and discussions to create knowledge from practice experiences (Knowles, 1973). The current study findings supported the theoretical proposition that students' involvement in the planning and evaluation of their instruction is a key motivation for online learning. For instance, P5 noted that "the discussion boards, groups, emails, and telephone calls have been instrumental with supporting my online experience." In addition, P5 noted the following:

> I enjoy the discussion boards that are usually required in online classes. I find them especially enjoyable if they require a personal opinion or experience. You can learn so much more about classmates that you wouldn't be able to learn in an in person setting because there wouldn't be time for everyone to share.

Limitations of the Study

One limitation was lack of detail provided by participants sufficient to capture the essence of their online-class experience. This may have been because participants were reluctant to admit their inability to master course material or it may have been my failure to probe sufficiently and/or follow up with prompts with the potential to solicit more in-depth information. Social desirability may bias participant responses as people are inclined to present themselves in the best possible light (Birt et al., 2016). While participant anonymity would limit the effects of social desirability bias, face-to-face

interviews conducted virtually make anonymity impossible; this is a limitation inherent in this type of qualitative research.

Recommendations

For this study, I have advanced several recommendations. Because the sample was diverse, having been recruited from various sources, participants simply did not share the same experience; this may explain why participant responses lacked depth sufficient to capture the essence of the online-class experience. To address this, I recommend that a case study, selecting participants from one school or discipline, would ensure that participant disclosures would reflect the experience of a shared phenomenon. Future studies could also explore the dimensional aspects of each theme using a quantitative or mixed methods design.

Implications

The study results had several implications. Findings suggest that students taking courses online want more and better-quality instructor-peer interaction, insights that can be used by stakeholders and policymakers in the education sector to inform online course design and instructor/student protocols. Implications for positive social change would include improved students' online learning experience, satisfaction, and increased student enrollment as the convenience of online education and improved course design would appeal to more expansive populations. Improving the online learning experience for undergraduate students would enhance instructor-student-peer classroom interaction and increase content mastery effecting positive social change for students at all levels.

Conclusion

Few studies have addressed the experience of online undergraduate students with regard to their satisfaction and ability to master online course content. Therefore, the purpose of the study was to explore the meaning of purposeful interpersonal interaction and content mastery among undergraduate working students taking an online psychology course. Purposive and snowball sampling were used for this study. Data analysis was conducted using Moustakas' (1994) recommendation for phenomenological research. Findings revealed that instructor responsiveness was critical to positive student experiences of online learning. Based on the study findings, it was evident that participants whose instructors provided timely feedback, responses, and assistance, expressed the highest level of satisfaction with their instructor interactions, whereas lack of consistent instructor feedback led to lower student satisfaction levels. The study findings also revealed that peer interaction/engagement was helpful in increasing student enjoyment of and success in their online psychology courses, though some participants indicated that peer interaction was unhelpful when inappropriate, aggressive, or tangential to the participant's contributions. Finally, the study findings indicated that clear course design and instructor-peer interactions contributed to content mastery. Participants indicated that providing clear course expectations and detailed instructions increased content mastery of complex course concepts. The above findings have several practical implications for positive social change. For instance, stakeholders and policymakers in the education sector may use the current findings to gain insights into

students' online experiences that will be used to inform online course design and instructor/student protocols.

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Appendix A: Interview Guide

1. Let's begin with your recent online psychology course. Speaking as broadly as possible, please tell me about your online learning experience .
2. Tell me about a time a time you experienced a satisfactory interaction with an instructor and/or peer in an online psychology course?
3. What is an example of a time you asked your online psychology instructor a question but did not receive a response?
4. Can you give an example of an online psychology course where students discussed the course material anywhere?? What do you remember most about the peer interaction?
5. Can you explain how course design contributed to content mastery of your online psychology course?
6. Which online tools such as discussion boards, emails, etc.…have worked best for interacting with the instructor and/or peers?
7. What's an example of an interaction with a peer or instructor that improved your understanding of the course content?
8. How has your satisfaction with the online learning experience been influenced by your interactions with the instructor and/or peers?
9. Would you like to share anything else about your interactions with your instructors and/or peers? About your sense of mastery of the course content?