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Doctoral Students' Experiences of Community of Practice in a
Hybrid Cohort-Based Program: A Case Study

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Education in Adult Education and Lifelong Learning

by

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Abstract

Graduate enrollment in the United States is increasing. With the advent of the cohort learning model and online delivery methods, adult learners now have greater access to higher education. The cohort learning model, which is based on elements of Community of Practice, has been shown to provide learners with a sense of community while also having a positive impact on retention. In a hybrid cohort-based learning model, many institutions provide the convenience of both online and face-to-face classes. Doctoral student attrition remains high, ranging from 40-50% across all programs, with rates as high as 70% in Education programs. The purpose of this qualitative case study is to explore how doctoral students experience Community of Practice while enrolled in a hybrid cohort-based education program. Specifically, this study examines student perceptions about how Community of Practice impacted their learning and retention.

Acknowledgements

I want to thank my cohort mates for their support, kindness, loyalty, friendship, and utter brilliance. I have learned something from each of you throughout our journey. My deepest appreciation goes to the faculty of the Adult and Lifelong Learning department. Thank you for encouraging me to finish the race. I express my heartfelt thanks to my family and friends for supporting and loving me as I have not been fully present to you during my doctoral journey. Lastly, I honor my heavenly Father, who surely has a soft spot for me. Without the constant presence of His love and faithfulness, none of this would have been possible.

Dedication

For my mother, whose fierce and unwavering love, unfailing kindness, and indefatigable belief

in me I am eternally grateful. You started this journey with me, but I lost you along the way.

Thank you, Momma. This is for you.

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Chapter I
Introduction

The purpose of this qualitative case study is to explore experiences of Community of Practice (CoP) in doctoral students enrolled in a hybrid cohort-based program in education. This learning model is noted for its positive effect on student retention. This chapter provides a background of Community of Practice and its application in higher education in the hybrid cohort-based learning model. In addition, the progression of online learning in higher education (HE) in relation to hybrid learning is discussed. The problem statement, purpose, and research questions of the study are established, followed by the theoretical framework, rationale and significance of the study, and the role and assumptions of the researcher. The chapter concludes with the definitions of key terms and the organization of the dissertation.

Background

Communities of Practice

Communities of Practice (CoPs) have existed in various forms, both formally and informally, for as long as human beings have chosen to learn together. In their seminal work, Lave and Wenger (1991) first coined the phrase "community of practice" while researching apprenticeships as a learning model. Once the term was formulated, the researchers began to see evidence of CoPs everywhere, even outside of more formal apprenticeship systems. The CoP may have been called by other names such as a club, band, forum, association, tribe, team, clique, or group. The concept has proven to be a useful perspective on knowing and learning (Teeuwsen et al., 2014). Many have belonged to various CoPs throughout their lives whether at work, home, school, or during pursuit of hobbies. The concept of CoP is found in various practical applications such as business, government, education, and other types of organizations

which have utilized CoPs to assist with performance improvement (Wenger-Trayner & Wenger-Trayner, 2015).

Communities of practice refers to groups of people who share a concern or a passion for a topic, a craft, or a profession where members deepen their knowledge and expertise through regular interaction with each other (Wenger, 1998). There are three characteristics of a community of practice:

1) Domain: Community members have a shared domain of interest, competence, and commitment that distinguishes them from others. This shared domain creates common ground, inspires members to participate, guides their learning, and gives meaning to their actions.

2) Community: Members pursue this interest through joint activities, discussions, problem-solving opportunities, information sharing, and relationship building. The notion of a community creates the social fabric for enabling collective learning. A strong community fosters interaction and encourages a willingness to share ideas.

3) Practice: Community members are actual practitioners in this domain of interest, and the same members build a shared collection of resources and ideas that they take back to their practice. While the domain provides the general area of interest for the community, the practice is the specific focus around which the community develops, shares, and maintains its core of collective knowledge.

Importance of Communities of Practice

As Wenger (1998) continued to research and expand the concept of CoPs, he posited that communities of practice serve five critical functions: they educate, support, cultivate, encourage, and integrate. CoPs educate by collecting and sharing information related to questions and issues of practice. Individual CoP members benefit from the shared knowledge and experiences of other

group members. CoPs support by organizing interactions and collaboration among members. This can lead to problem-solving, which is enhanced by a wide range of strengths, weaknesses, and collective experiences of the community coming together to brainstorm potential solutions. Additionally, CoPs cultivate by assisting groups to start and sustain their learning. As the group collaborates with members and contributes to one another, knowledge or skills gaps are filled. Examples of contributions in a doctoral cohort could be peer-to-peer tutoring, peer review, or editing of work. Individual members encourage by promoting the work of other members through discussion and sharing. It is common for a CoP to create a centralized knowledge base of information. This contributes to the speed and efficiency of training or educating new community members. Lastly, CoPs integrate by encouraging members to use their new knowledge for real change in their own work. The CoP model potentially provides new team members with the resources and networking connections they need to succeed.

Cohort Learning

According to Rausch and Crawford (2012) cohort-based learning began its rise in Higher Education Institutions (HEIs) in the early 1990s. Dorn and Papalewis (1997) suggested cohort programs came into favor to increase student retention, graduation, and success rates. Cohort-based learning has become more popular in HEIs in response to the increasing rates of students failing to complete their bachelor's, masters, and doctoral programs (Lei et al., 2011). Reynolds and Hebert (1995) described a cohort as students who proceed through a program of learning together in a sequential manner. Saltiel and Reynolds (2001) further defined cohorts as:

> one in which a group of individuals enter a program at the same time, proceed through all
>
> classes and academic requirements together, completing together, thus creating an

atmosphere for learning in which a synergy is present and the learners' effectiveness is increased. (p. 6)

There are three types of cohorts: closed, open, and fluid (Yerkes et al., 1995). Closed or pure cohorts are those where all students enter a program together, take the same classes in a prearranged sequence, and finish together. Open or mixed cohorts require students to enroll in a core set of classes together and take additional elective courses to meet their own needs. Fluid or course-by-course cohorts allow students to join the cohort at different entry points rather than only one entry point. The latter are sometimes looked on as a traditional method of scheduling students and may not exemplify a true cohort. Closed and open cohorts are commonly used in higher education, with closed being used most of the time. This choice makes sense as group development literature emphasizes the importance of trust, interdependence, and interaction (Yerkes et al., 1995). This study examines the experiences of students in a closed cohort design.

Saltiel and Russo (2001) posit that the cohort-based learning model relies upon the power of interpersonal relationships to enrich learning and provide additional support through the duration of the program. The collaborative aspects of the cohort model incorporate the best of Wenger's Community of Practice, which states that learning in a social context requires contribution and recognition of the learner's experience and practice as a critical element in developing competence (Wenger, 2009).

Cohort models can be beneficial to the student, the faculty, and the program itself for varied reasons. Seed (2008) mentioned a positive peer relationship that forms familial and emotional ties, team views, and team responsibilities. In spending time learning together, cohort groups celebrate, grieve, share meals, and offer academic and psychological support to each other (Lei et al., 2011; McCarthy et al., 2005). Positive academic outcomes of cohort structure

include enhanced learning, reflective abilities, and multiple perspectives for problem solving (Barnett et al., 2000; Hill, 1995; Norton, 1995). In addition, research shows an increase in motivation, commitment, and persistence among cohort students (Hill, 1995). Program benefits include clearer course sequencing, increased associations between faculty and students, development of professional networks, and higher degree completion rates (Barnett & Muse, 1993; Barnett et al., 2000; Hill, 1995; Scribner & Donaldson, 2001). The cohort model is successful when programs are effective in developing a learning community characterized by trust, openness, and empowerment (i.e., empowering students as adult learners) (Browne-Ferrigno & Muth, 2001; Hill, 1995; Merriam & Cafferella, 1999).

Importance of Cohort Learning

Lei et al. (2011) suggest there are multiple potential benefits to learners enrolled in a cohort versus non-cohort learning model:

- Membership in a group of learners with similar goals

- Positive peer relationships

- More cooperative learning, peer teaching, and student-led discussions

- More collaborative voice when addressing certain issues to instructors

- More likely to create study groups and research partners

- Higher retention, graduation, and success rates of students

- More social, academic, and professional networks

Lei et al. also posits the following benefits to faculty:

- Easier for instructors to manage the advising of cohort students

- Easier for instructors to disseminate important academic information

Online Learning

According to Gallagher (2019), online education is "one of the fastest growing segments of higher education in the U.S.—and demands continue to rise" (p. 1). The National Center for Education Statistics (2022) reported that in Fall of 2020, the first year in which Fall enrollment may have been affected by the Covid-19 pandemic, 3.1 million students were enrolled in postbaccalaureate degree programs in the United States. That includes master's programs, doctoral programs, and professional doctoral programs. Postbaccalaureate enrollment is projected to be 6% higher in 2030 than in 2020 (3.3 million vs. 3.1 million students). In Fall of 2020, 2.2 million or 71% of all postbaccalaureate students enrolled in at least one distance learning course. Some 1.6 million or 52% of postbaccalaureate students took distance education courses exclusively. These were higher than the percentages in 2019. Specifically, 1.3 million students, or 42% of all postbaccalaureate students, enrolled in at least one distance education course in 2019 and 1.0 million students, or 33%, took distance education courses exclusively.

According to Shah (2019) most online education programs include meaningful interaction with faculty, which is a departure from more self-paced massively open online courses (MOOCs), which have risen and quickly fallen in popularity in recent years. A large-scale national survey by Ruffalo Noel Levitz (2017) reported that when deciding to enroll, online learners are most motivated by factors such as convenience, work schedule, and flexible pacing. Other surveys have found that online students are motivated to pursue postsecondary education primarily for career-related reasons. These reasons include transitioning to a new field, updating skills, or earning a promotion (Clinefelter et al., 2019). Online students tend to be working adults pursuing post-secondary education (Gallagher, 2019). Wu (2015), in reviewing twelve studies of online learning, noted that students taking online or hybrid courses versus the same traditional

face-to-face courses performed equally well. Research emphasizes the importance of creating Communities of Practice to foster meaningful online education (Lively et al., 2021). Esfijani (2018) contends that there are still many gaps in how the quality and outcomes of online learning are measured.

Importance of Online Learning

Through online learning offerings, HEIs can offer education beyond the traditional face-to-face programming. This opens educational opportunities to a segment of the population that may not have been able to access education such as working adults (Lee & Choi, 2011). Though this study focuses on online learning within the context of an entire educational program, other online offerings such as micro-credentials, certificates, and continuing education credits are also offered. Online learning offers both part-time and full-time learning with greater flexibility for the learner.

Hybrid Learning

Hybrid delivery is a more recent development in HEIs. In higher education, the terms "hybrid learning" and "blended learning" are often used synonymously. At their core, hybrid and blended learning models are a combination of online and traditional face-to-face classroom learning. However, there is a difference as online components of hybrid courses intend to substitute in-person class time. Siegelman (2019) posits that hybrid courses differ from blended learning because their online components are intended to replace a portion of face-to-face class time. Online interactions can either be synchronous, meaning that students are interacting online in real-time, such as through class sessions conducted via Zoom, a communications platform that allows users to connect with video, audio, phone, and chat (Zoom, n.d.), or asynchronously where students interact online at various times, such as through online discussion boards through

voice recorded technology. Rausch and Crawford (2012) suggest the confusion in the definition is partly due to the variety of approaches to the hybrid model which may be based on teaching styles, course content, course size, and course objectives or goals.

Importance of Hybrid Learning

Hybrid learning combines the "best of both worlds" by combining elements of face-to-face and online learning. Some types of learning may be aided by technology, and class time may be reduced or used for activities that require more face-to-face interaction. An integrated course model benefits a broader range of learners by providing flexibility, more learning options such as synchronous or asynchronous activities, and the integration of content and instructional strategies that lead to deeper learning. Hybrid learning combines the best practices of online learning and face-to-face learning (Center for Teaching Innovation, n. d.). The positive aspects of the cohort model remain consistent and are enhanced by a hybrid learning environment. According to Rausch and Crawford (2012):

> The social interaction, which takes place in the face-to-face session, combined with the virtual classroom appears to strengthen the learning process by balancing the relationship aspects from the face-to-face classroom with the asynchronous format provided in the virtual classroom for analysis, reflection, and synthesis. (p. 177)

Hybrid learning offers working professionals an opportunity to pursue an undergraduate or graduate degree without having to physically relocate or leave their jobs and families to attend classes full-time at a campus location.

Problem Statement

According to Casutto (2013), 50% of doctoral students leave graduate school without finishing. While the literature often speaks to HEIs and their faculty about the advantages of

developing cohort-based and hybrid learning models, there appears to be a gap in the literature surrounding the actual experiences and perspectives of students enrolled in a doctoral program in education that is delivered in a hybrid cohort-based model. Understanding the advantages and disadvantages of this model from the student perspective may help inform HEI of best practices moving forward.

Purpose of the Study

The purpose of this qualitative case study is to explore how doctoral students experience Community of Practice while enrolled in a hybrid cohort-based program. Specifically, this study examines student perceptions about how Community of Practice impacted their learning and retention.

Research Questions

Research suggests that the cohort model is an adult learning model characterized by member affiliation and a keen sense of purpose (Greenlee & Karanxha, 2010). The model has been found to align with the principles of andragogy and the unique characteristics of adult learning (Knowles, 1988). In addition, Rausch and Crawford (2012) suggest the positive aspects of the cohort model are enhanced by the addition of a hybrid environment. The overarching research questions guiding this study are:

RQ1: How do doctoral students experience a hybrid cohort-based program?

RQ2: How do students describe their experiences of CoP in their program?

RQ3: How did CoP impact their academic journey?

Overview of Research Design

The research approach for this qualitative study is case study. Yin (2018) suggests that a case may be defined as an individual or a small group. In addition, a case study research

approach allows the researcher to explore a contemporary phenomenon by asking questions such as "how?" and "why?" pertaining to the subject matter. Every exploration should have a purpose (Yin, 2018), and the purpose of this qualitative case study is to explore the experiences of Community of Practice among doctoral students enrolled in a hybrid cohort-based education program.

Merriman (1998) suggests that a case study must delimit the object of study. This is accomplished by "fencing in" (p. 27) or placing boundaries around what is to be studied. Merriman's suggestion directly reflects Smith's (1978) suggestion that a case study is a bounded system. Miles and Huberman (1994) posit the case is "a phenomenon of some sort occurring in a bounded context" (p. 25). This study is bounded by time and context. Doctoral students who are or have been enrolled in a hybrid cohort-based program over a five-year period will participate in this study.

Theoretical Framework

The theoretical framework guiding this case study is Hoadley and Kilner's (2005) C4P Framework for Communities of Practice. Hoadley and Kilner posit that no matter the learning theory, communities can provide opportunities for learning, whether through deliberate education or accidental adaptation. Sociocultural learning theory can be applied to either situation. This theory is based on a particular type of community, the Community of Practice. Further, the goal of knowledge-building communities of practice is developing individual and collective knowledge and learning, which are significantly accelerated in a CoP. The authors developed a model of how learning takes place in knowledge-building CoPs. The C4P Framework for Communities of Practice posits that "knowledge is generated and shared when there is purposeful conversation around content in context" (Hoadley & Kilner, 2005, p. 33). In

this model, C4P stands for content, conversation, connections, (information) context, and purpose which comprise a non-linear system occurring in CoPs. An increase in any of these elements results in an increase in all the others, though not in equal proportions. The five elements draw from and reinforce one another and are important to effective knowledge building, even in an online community. It is through the lens of these five elements that this study will be viewed.

Rationale and Significance

Higher Education has seen a decline in enrollment in the last decade, particularly in undergraduate programs (NCES, 2022a). Graduate program enrollment has remained consistent, with a slight increase since the Covid-19 pandemic began (NCES, 2022b). However, doctoral programs continue to struggle with attrition at a rate of 40-50% (Litalien & Guay, 2015). This rate has remained consistent over several decades. Reasons and the timing for dropping out of a doctoral program vary, including job opportunities, financial, and family obligations. Some students complete all coursework but fail to complete their dissertation. This is referred to as all but dissertation (ABD) students. There are consequences for the student, institution, and society. Students who drop may have fewer job opportunities and suffer from low self-esteem. For HEIs, attrition reduces resources and incurs costs for faculty who have invested time and resources toward incomplete research. Society may see lower productivity and competitiveness (Litalien & Guay, 2015). Cohort-based learning models have shown a positive impact on retention in doctoral programs (Hill, 1995). As hybrid learning has become a more common program delivery model in Higher Education, it seems appropriate to explore and understand the experiences of doctoral students enrolled in a hybrid cohort-based learning model. Explored from a case study approach, these student experiences can inform HE of best practices for

curriculum design and faculty management. The students' perspectives along with identifying suggestions for improvement informs future practices that may impact increased retention rates.

Role of Researcher

In January 2020, I began my doctoral studies in Adult and Lifelong Learning in the College of Education and Health Professions at the University of Arkansas. The program is offered in a hybrid cohort-based learning model. This delivery model is unique to my experience. The learning is delivered primarily online, with face-to-face classes required on campus during three pre-determined Saturdays each Spring and Fall semester.

As a master's student, I participated in a cohort learning model which was delivered face-to-face, where I attended class on campus one evening per week in a classroom setting. The only online aspect of the program was the use of the learning management system (LMS), Blackboard® (n.d.), to obtain and submit assignments. Blackboard Learn (Blackboard®, n.d.) is also used by the University of Arkansas to facilitate online learning.

As a doctoral student, my tenure in the program includes the onset of the Covid-19 pandemic. Classes began in January 2020. Orientation was held in conjunction with the first Saturday class where I met and became acquainted with my classmates. Within weeks following this first face-to-face class, the Covid-19 pandemic ensued, causing the two remaining face-to-face classes to be offered online via Zoom (n.d.). Higher education institutions were required to pivot, offering classes online due to the closure of campuses in response to the pandemic. This added a different dimension of learning than originally expected. I had looked forward to forging deeper connections with my classmates beyond the initial connections formed at orientation. How would I now form relationships essential to my learning and to my sense of belonging? When the Fall 2020 semester began, my cohort was allowed to resume Saturday classes while

maintaining a prescribed social distance of six feet and always wearing a mask. Some cohort members took the option to join via Zoom (n.d) over concerns surrounding the uncertainties of the pandemic. Though I chose to attend, I still felt isolated by these imposed but necessary barriers to our cohort's campus classes. The requirements for masks and distancing lessened as the pandemic ran its course. However, some professors chose to hold subsequent Saturday classes via Zoom (n.d.). There was no consistency in face-to-face interactions in the classroom as the program was originally designed.

As a researcher, I questioned how these unexpected changes that pivoted our cohort away from opportunities for face-to-face interactions would impact our sense of connection and cohesion. I wondered if we would lose some classmates as a result. How do students in a fully online program make connections and build community? I would like to explore how doctoral students experience CoP in a hybrid cohort-based learning model. As a participant, my perspective in this study is emic. I am an insider and full participant in the phenomenon explored in this case study.

Researcher Assumptions

Based on my personal experience as a student in a hybrid cohort-based learning model, certain assumptions may positively or negatively impact the study. First, I assumed I would be well-prepared by the program and faculty to conduct research and successfully write and defend a dissertation. Second, I did not fully understand the nature of a cohort learning model from a community of practice perspective, nor did I anticipate that learning could be generated among group members toward the common goal of completion. Third, though I anticipated earning a doctorate would be challenging, I did not anticipate the level of anxiety and stress induced by the process. If not for the support provided by my classmates in the cohort, I feel certain I would

have fallen into the ABD category. Lastly, it was my assumption that faculty would actively manage the cohort to maximize learning among participants.

Definitions

The following is a list of definitions of terms used throughout this study. These definitions are being provided for clarification as some of these terms are defined interchangeably in the literature. For this case study, the terms and their definitions are:

Community of Practice – A community of practice is a group of individuals who share a concern or a passion for something they do and learn how to do it better as they interact regularly (Lave & Wenger, 1991).

Cohort learning – A group of students (usually adults) who proceed through a program of learning together, sequentially taking all courses, and completing them together (Reynolds & Hebert, 1995).

Online learning – Online learning is defined as education delivered in an online environment using the internet for teaching and learning. This includes online learning on the part of the students that is not dependent on their physical or virtual co-location. The teaching content is delivered online, and the instructors develop teaching modules that enhance learning and interactivity in a synchronous or asynchronous environment (Singh & Thurman, 2019).

Hybrid learning – Hybrid learning includes both online and face-to-face learning models within a given program. The ratio of face-to-face versus online varies and the online portion may be synchronous or asynchronous (Gagnon, et al., 2020).

Organization of Dissertation

The literature varies in its definitions of hybrid learning and online learning. In addition, there are advantages and disadvantages to hybrid cohort-based learning models. In particular, the

gap in actual student experiences is explored. Chapter 3 will expand upon the case study research methodology.

Chapter II Literature Review

Introduction

The purpose of this qualitative case study is to explore doctoral students' experiences of Community of Practice in a hybrid cohort-based education program. Though reasons vary, doctoral student attrition in the United States has consistently remained between 40 and 50% for several decades (Litalien & Guay, 2015). Attrition rates within Ed.D. programs range from 50-70% (Ivankova & Stick, 2007; Rockinson-Szapkiw et al., 2014; Holmes & Rockinson-Szapkiw, 2020). Cohort learning is rooted in the social learning constructs of CoPs, which have been shown to have a positive impact on doctoral student retention (Willetts & Mitchell, 2006; Janson et al., 2004). To further clarify the background and need for this study, chapter two will provide an overview of relevant literature surrounding CoPs, cohort, online, and hybrid learning models. The conflicting definitions of online and hybrid learning will be reviewed along with their relevance to this research, followed by the conceptual framework guiding the case study. The topics to be explored include Community of Practice, cohort learning, online learning, and hybrid learning.

The following research databases were utilized to find journal articles, dissertations, conference papers, and books related to hybrid learning, online learning, and cohort learning models for doctoral programs: University of Arkansas Libraries, ERIC, SAGE, Wiley Online Library, ProQuest, and Google Scholar. Key words used in the initial search included: communities of practice, cohort learning model, hybrid learning, blended learning, and online learning.

Review of Literature

Community of Practice

The phrase "community of practice" was coined by Lave and Wenger (1991) while conducting research on apprenticeships. Lave and Wenger (1991) moved away from the concept of traditional learning to a more comprehensive view of what constitutes learning activity. They introduced the theory of situated learning which posits that learning occurs in a social context where knowledge is constructed collectively. Individuals learn by doing within the context of a community of practice. The idea of knowledge-as-situated is a departure from the school-oriented notion of knowledge-in-the-head (Hoadley, 2012). In their seminal work, Lave and Wenger (1991) also presented the idea of legitimate peripheral participation. Legitimate peripheral participation describes the action of a new member entering a group and participating and interacting with experienced members of a Community of Practice (CoP). By learning and adopting practices of the group, the newcomer evolves into an expert. The new participant moves through the developmental cycles of learning while building relationships with the expert members and a new identity within the CoP. The novice learner is transformed into a seasoned practitioner, and their changing knowledge, skill, and discourse with other members are part of a developing identity as a member of a CoP. Situated learning becomes integral to entry and participation in the CoP. Knowing is inherent in the growth and transformation of identities and is found in the relationships among the practitioners, their practice, and the social organization of CoPs. Teeuwsen et al. (2014) suggested "from a situated perspective, participation is a way of knowing" (p. 683). All of this takes place in a "social world, dialectically constituted in social practices that are in the process of reproduction, transformation, and change" (Lave & Wenger, 1991, p. 123).

Lave and Wenger's (1991) original work emphasized the social learning aspects of learning and knowing within a CoP. This social learning theory is a departure from transmissive education (Bradshaw, 2017) which is an approach defined as the transmission of knowledge by the educator to the learners while disregarding the learners' lived experiences and contexts. The focus of the CoP is on learning existing skills through situated learning. Lave and Wenger's description of naturally occurring communities of practice, for instance the apprenticeship of tailors, highlights the importance of learning being situated in authentic practice contexts. This allows a learner to "do" what is learned.

Wenger continued to research and refine the theory of CoP beyond the original work with Lave. In his 1998 book, Wenger incorporated theoretical aspects from education, sociology, and social theory focusing on socialization and learning (Li et al., 2008). While not expanding on the original concept of novice-to-expert, Wenger posited that CoPs are bounded by three interconnected domains: mutual engagement, joint enterprise, and shared repertoire. Li et al. (2008) summarized the three:

> Mutual engagement represents the interaction between individuals that leads to the creation of shared meaning on issues or a problem. Joint enterprise is the process in which people are engaged and working together toward a common goal. Finally, shared repertoire refers to the common resources and jargons that members use to negotiate meaning and facilitate learning within the group.

Wenger also expanded on the importance of trajectories through various levels of participation within a CoP group. Along with the three domains, he proposed 14 indicators for detecting the presence of a CoP as shown in Table 1 (Wenger, 1998).

Table 1

Wenger's Indicators for the Presence of CoP and the Proposed Domains

Wenger's indicators	CoP domains
1. Sustained mutual relationships – harmonious or conflictual	Mutual engagement
2. Shared ways of engaging in doing things together	Mutual engagement Joint enterprise
3. The rapid flow of information and propagation of innovation	Mutual engagement
4. Absence of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process	Mutual engagement Shared repertoire
5. Very quick setup of a problem to be discussed	Mutual engagement Shared repertoire
6. Substantial overlap in participants' descriptions of who belongs	Mutual engagement
7. Knowing what others know, what they can do, and how they can contribute to an enterprise	Mutual engagement Joint enterprise Shared repertoire
8. Mutually defining identities	Mutual engagement
9. The ability to assess the appropriateness of actions and products	Shared repertoire
10. Specific tools, representations, and other artefacts	Shared repertoire
11. Local lore, shared stories, inside jokes, knowing laughter	Shared repertoire
12. Jargon and shortcuts to communication as well as the ease of producing new ones	Shared repertoire Mutual engagement
13. Certain styles recognized as displaying membership	Mutual engagement
14. A shared discourse reflecting a certain perspective on the world	Mutual engagement

Note. The contents of the table include Li et al.'s (2008) interpretation of Wenger's dimensions.

Li et al. (2008) suggested the depiction of CoP in Wenger's 1998 publication raised controversies about the use of the term "community", claiming it is prone to various interpretations, and the concept is challenging to apply.

Wenger (1998) suggested that CoPs serve five critical functions. First, CoPs educate by collecting and sharing relevant information surrounding the practice. Second, CoP members support the community by organizing meaningful interactions and collaboration with one another. This provides opportunities for problem identification and problem-solving, enhanced by the range of strengths, weaknesses, and collective experiences of the members as they come together to brainstorm viable solutions. Third, CoPs cultivate by assisting members in beginning—as a legitimate peripheral participant—and sustaining their learning. Cultivating in this way fosters collaboration, allowing members to contribute to one another with the intent of filling gaps in knowledge and skills. Fourth, CoP members encourage one another by promoting

the work and ideas of other members through sharing and discussion. According to Wenger (1998), it is common for CoPs to create a centralized knowledge information base which in turn contributes to the speed and efficiency of training or educating new members. Lastly, a CoP integrates by encouraging its members to apply the knowledge generated within the CoP to their individual work for the purpose of real change.

The application of CoP became popularized not only in education, but within the business sector. Wenger collaborated with McDermott and Snyder (Wenger et al., 2002) and shifted the focus of CoP from individuals' learning and identity development to a tool for organizations to manage knowledge workers. Where Wenger's previous publications suggested CoPs emerged organically, this work posited that CoPs can be engineered, or intentionally created within an organization to improve competitiveness. In this work, CoP was defined as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al., 2002, p. 4). This work portrayed CoPs to foster innovation and creative problem solving within an organization. So that organizations could use CoP as a management tool, Wenger et al. (2002) revised the three previous characteristics of CoP to domain, community, and practice.

The domain is where members have a shared domain of interest, competence, and commitment that distinguishes them from others. This shared domain creates common ground, inspires members to participate, guides their learning, and gives meaning to their actions. The community creates social structure where members pursue their domain of interest through joint activities, discussions, problem-solving opportunities, information sharing, and relationship building. The community creates the social construct for facilitating collective learning. In this context, a strong community fosters interaction and encourages a willingness to share ideas.

The practice is a set of common repertoires allowing members to build a shared collection of resources and ideas that they take back to their practice. While the domain provides the general area of interest for the community, the practice is the specific focus around which the community develops, shares, and maintains its core of collective knowledge.

Wenger et al. (2002) claimed CoPs can optimize the creation and dissemination of knowledge when these three characteristics work together in a mature CoP. However, Li et al. (2008) observed that the authors were less clear about fostering the three characteristics in the early stages of an engineered CoP. It is in this work that the roles of leaders or champions and facilitators are introduced. The former is responsible for talking about the CoP within the organization much like a public relations or marketing person. The facilitator is responsible for the day-to-day activities of the group, recruiting new members, and allocating resources for group work. Further research has suggested that there are limitations to CoPs when intentionally engineered and utilized within an organization.

Wenger's research is underpinned by situated learning and social learning theory. Social learning theorists suggest that communities provide a foundation for sharing knowledge. Bandura (1977) believed that individuals learn behaviors or skills by observing and modelling other people rather than by trial and error. Social constructivists understand learning as an individual's responsibility, and the community is how people learn. Communities provide a safe environment for individuals to engage in learning through observation and interaction with experts and through discussion with colleagues (Cobb, 1994; Cobb & Yackel, 1996).

Other Iterations of Community of Practice

Other iterations surrounding the theory of Community of Practice have emerged in response to changes in learning mediums. In their seminal work, Garrison et al. (2000) posited a

conceptual framework known as a Community of Inquiry (CoI) in response to the growing use of

computer-mediated communication in higher education. The Community of Inquiry (CoI)

framework was developed as a guide for online pedagogy and research (Jan et al., 2019). The

framework identifies three essential elements in a CoI: Cognitive Presence, Social Presence, and

Teaching Presence. In their later research, Garrison et al. (2010) noted that "the CoI framework

is dependent upon the interaction of all presences to a greater or lesser degree depending on the

subject matter, the learners, and the communications technology" (p. 6). Cognitive presence is

the extent to which online learners can construct and validate meaning based on critical and

continuous communication and thinking (Garrison et al., 2000; Garrison et al., 2001). Teaching

presence is "the design, facilitation, and direction of cognitive and social presences for the

purpose of realizing personally meaningful and educationally worthwhile learning outcomes"

(Garrison et al., 2000, p. 5). Lastly, social presence is the ability of the participants in a CoI "to

project themselves socially and emotionally, as 'real' people (i.e., their full personality), through

the medium of communication being used" (Garrison et al., 2000, p. 94).

Distributed Communities of Practice (DCoP) have begun to emerge to bring together

members that are not co-located. A DCoP refers to a group of geographically distributed

individuals who are informally bound together by shared expertise and shared interests or work.

Members of DCoPs utilize information and communication technologies to connect with each

other while striving to inject a social learning component (Kilner, 2006; Daniel et al., 2003).

Wenger et al. (2002) confirmed that while CoP's require regular interaction, it is not mandatory

that members are co-located, and various information technologies can be used to support online

communities of practice (OCoP). Wasko and Faraj (2005) define these virtual communities as

social group that exists through computer-mediated communication which focuses on shared practice and knowledge.

Underpinning each of these types of learning communities is connectivity or a sense of belonging and learning within a social context. In the social learning system, learning is the development of new patterns of behavior by direct experience or by observing others (Bandura, 1977). Learning is not fulfilled in isolation but accomplished across the accumulation of interactions that define and motivate learners (Bayless, 2021). Feelings of isolation among doctoral students is a common theme in the literature and shown to be a factor in student attrition (Lively et al., 2021; Litalien & Guay, 2015).

Studies have confirmed CoPs address the sense of isolation commonly experienced by doctoral students (Bista & Cox, 2014; Janson et al, 2004; Cherrstrom et al., 2018; Lewins, 1993; Sternberg, 1981). In their study, deChameau (2014) stated that "with respect to program completion as an indicator of success, Willets and Mitchell (2006) and Janson et al. (2007) found that participating in a community [of practice] encouraged student persistence in a program" (p. 63). Evidence was found that CoPs helped students overcome obstacles and reduce isolation (Janson et al, 2004; Lee et al., 2006; Willetts & Mitchell, 2006) and increase persistence (Ferreira, 2010; Janson et al., 2004; Willetts & Mitchell, 2006).

Limitations of Community of Practice

Four overarching limitations of CoPs include time constraints, organizational hierarchies, socio cultural environment, and they are informal and organic by nature. Wenger et al. (2002) spoke to the downside of CoPs arguing that:

> The very qualities that make a community an ideal structure for learning—a shared perspective on a domain, trust, a communal identity, longstanding relationships, and

established practice—are the same qualities that can hold it hostage to its history and its

achievements. (p. 141)

Roberts (2006) suggests issues surrounding power, trust, and predispositions must be

considered. To achieve full understanding of knowledge creation and dissemination, a clear

understanding of the power dynamics within a CoP must be understood. Members with varying

experience, expertise, age, personality, and authority within the organization may be present in a

CoP. Roberts goes on to say that without trust, there may be a reluctance to share knowledge

among members of a CoP. Members may become resistant to change due to groupthink or a

predisposition to or reliance upon their former knowledge, rendering them static in terms of

changes to their practice, or their ability to innovate (Roberts, 2006; Fox, 2000). Further

considerations must be given to the availability of time required to cultivate a sense of

community and engage in the activities that make CoPs effective. Other constraining factors

include the "speed" of change in business culture, organization hierarchies, membership size,

and socio-cultural considerations of more distributed CoPs. An example of the latter would be

the cultural influences and differences between Eastern and Western business societies (Kerno,

2008).

Cohort Learning Model

For well over four decades in the United States, the cohort-based learning model has

become increasingly popular, particularly in doctoral programs in education (Bista & Cox,

2014). Interconnectedness is a crucial aspect that the cohort learning model offers (Winn et al.,

2019). The practice of this model is associated with higher student retention rates and optimizing

knowledge and educational experience among the cohort members (Lei et al., 2011; Maher,

2005). Saltiel and Russo (2001) found the cohort learning model uses the power of interpersonal

relationships to enhance the learning process and provide ongoing support to its members toward completion. Burns and Gillespie (2018) found that in addition to the correlation between program completion and the need for relatedness, their research revealed the relational aspect of the cohort model was vital in helping doctoral students feel supported in their dissertation phase. Seifert and Mandzuk (2006) posit that cohort learning helps develop intellectual stimulation and form social ties among its members. Nimer (2009) suggests that cohort-based doctoral programs offer members opportunities for success by way of personal and professional support toward academic interaction and degree completion. In this type of learning community, educators have agreed that student performance is positively impacted when a strong social and professional bond forms between students and their professors (Hyatt & Williams, 2011; Nimer, 2009; Williams & Simpson, 2010). Learning in a cohort learning model fosters valuable opportunities for students to engage in communities of practice through the collaborations of peers and supervisors (De Lange et al., 2011).

In doctoral education programs, cohorts are defined as "a group of 10-25 students who begin a program of study together, proceed together though a serious of developmental experiences in the context of the program of study, and end the program at approximately the same time" (Lei et al., 2011, p. 479). Nimer (2009) corroborates the use of "lock-step" programming, stating this eases stress surrounding registration for the adult learner who is balancing multiple responsibilities and priorities beyond their educational pursuits. Designed for working adults and beneficial for part-time as well as full-time students, cohort-based doctoral programs are well received both domestically and globally (Bista & Cox, 2014; Gardner & Gopaul, 2012). Cohorts are described as either closed, open, or flexible. A closed cohort is a group of students selected by the faculty and institution who pursue a program of study together.

Pemberton and Akkary (2010) posit these groups are "characterized by social processes, shared experiences and interactions, collective efforts, and mutual commitments to an educational goal" (p. 180). Conversely, an open cohort is flexible in that members may come and go throughout the life of the cohort, taking courses outside of the predetermined coursework (LaMorte, 2012; Pemberton & Akkary, 2010; Potthoff et al., 2001). Lastly, a flexible or fluid cohort, sometimes called a course-by-course cohort, allows students to join the cohort at different entry points rather than only one entry point. The latter are sometimes looked on as a traditional method of scheduling students and may not exemplify a true cohort (Yerkes et al., 1995).

Though the need, design, and practices of cohorts may vary between institutions and education programs, Barnett and Caffarella (1992) suggested four elements are necessary: 1) improved admission criteria; 2) instructional delivery methods designed to enhance interactions, reflection, and learning opportunities; 3) interaction and connection between old and new members; and 4) member responsiveness to adult learner experiences.

Advantages of a Cohort Learning Model

Bista and Cox's 2014 study listed strengths and drawbacks of membership in a cohort-based learning model. Cohort members collaborate on tasks and assignments, building a shared culture with similar academic and professional goals. Positive member relationships result in ties that create a familial culture (Seed, 2008). During their learning together, cohort members often celebrate birthdays, share meals, attend social gatherings, and provide academic and psychological support to one another (Lei et al., 2011; McCarthy et al., 2005). Students form bonds based on interests, gender, and academic knowledge. Like a family, members provide each other academic, personal, and social support. Because of the type of support received from

fellow members, cohort models are beneficial for students who are older, married, parents, or are part-time (Sax, 2008; Tokuno, 2008).

Limitations of a Cohort Learning Model

Success for cohort members is hampered if there is a lack of mutual collaboration of faculty, departments, and administrative structures within the university. In this scenario, students may feel ignored or even isolated if they feel they are not receiving the support needed (Bista & Cox, 2014). Formation of cliques within a cohort as students are naturally drawn to others like themselves may contribute to feelings of isolation among cohort members (Lei et al., 2011). Intellectual mismatches and personality conflicts may arise within the membership contributing to a breakdown in trust should other students be perceived as not pulling their weight in group activities (Maher, 2005). In addition, certain students may predictably monopolize discussions, limiting contributions from other members, all of which exist for the duration of the program (Teitel, 1997; Maher, 2005). A closed cohort design may limit student exposure to philosophies and points of view from other instructors and students. Cohorts may be susceptible to stunted knowledge growth due to groupthink (Unzueta et al., 2008). While trust and cohesion are vital elements of a successful cohort experience, unhealthy competitiveness among members may undermine the positive aspects of a cohort (Seed, 2008). Lei et al. (2011) posits that cohorts may exhibit characteristics of a dysfunctional family when negative attitudes and relationships are allowed to develop. Lastly, cohorts who enjoy positive experiences and collegiality may feel anxiety and sadness upon disbanding at the completion of their educational journey (McCarthy et al., 2005).

Online Learning

The literature confirms confusion and ongoing debate surrounding the definition of online learning. According to Singh and Thurman (2019), the term online learning was first used in 1995 when WebCT was developed as the first Learning Management System (LMS). This later became Blackboard® (n.d.). In that original context, online learning involved using the LMS for uploading text and pdfs online (Bates, 2014).

Singh and Thurman's (2019) research endeavored to analyze the existing definitions of online learning to improve understanding of the concept, its key elements, and evolution of its definitions. Though the concept of online learning is often defined in the literature, it has a range of meanings as authors and scholars use the term to indicate very distinct and often contradictory concepts. Between 1988 and 2017, Singh and Thurman (2019) found 46 definitions of online learning, with 18 different terms used in those definitions. The top three overlapping terms were: online learning, e-learning, and blended learning. Interestingly, many of the definitions for online learning posit the confusion and lack of clarity, pointing out that this continues to be an issue as recently as 2017.

Most authors agreed that no matter the term used in defining online learning, technology is a critical component of the definition. Early definitions focused more on the technology where later definitions include interactivity as a key element of online learning and begin to point out "lack of community" as problematic (Singh & Thurman, 2019).

For the sake of this case study, online learning is defined as education delivered in an online environment using the internet for teaching and learning. This includes online learning on the part of the students that is not dependent on their physical or virtual co-location. The teaching content is delivered online, and the instructors develop teaching modules that enhance

learning and interactivity in the synchronous or asynchronous environment (Singh & Thurman, 2019).

Online Learning in Cohorts

With the advent of online learning, universities were able to reach larger geographic areas without a significant increase in resources. While fully online program offerings may allow for greater convenience to the learner, in many cases the social aspects of learning may be ignored or severely undermined (Rausch & Crawford, 2012). In their study, Coole and Watts (2009) linked successful e-learning models to the effectiveness of constructivist learning styles which add to the richness of knowledge construction and transfer. As unabashed boosters of the cohort learning model, Saltiel and Russo (2001) support this concept, emphasizing the power of the cohort bonding process. Programs using the cohort model have embraced the concept of online learning communities.

Hybrid Learning

Like the many definitions of online learning, there are a variety of approaches and definitions of hybrid learning as well. Hybrid delivery is a more recent development in HE. The terms "hybrid learning" and "blended learning" are often used synonymously in HEIs. At its core, hybrid and blended learning models are a combination of online and traditional face-to-face classroom learning. However, there is a difference. Siegelman (2019) posits that hybrid courses differ from blended learning in that their online components are intended to replace a portion of face-to-face class time. Online interactions can either be synchronous, meaning that students are interacting online in real time, such as through class sessions conducted via Zoom, a communications platform that allows users to connect with video, audio, phone, and chat (Zoom,

n.d.), or asynchronously where students interact online at various times, such as through online discussion boards or through voice recorded technology.

Rausch and Crawford (2012) suggest the confusion in the definition is partly due to the variety of approaches to the hybrid model which may be based on teaching styles, course content, course size, and course objectives. They present the Hybrid Learning Model as seen in Figure 1. The social learning environment is maintained by the in-classroom interactions. As a cohort, the members move through the program together, meeting in person to establish relationships and to begin to form a sense of community. In turn, the online nature of the program allows for flexibility and accessibility of the program, while maintaining the social constructs of the cohort model. The strengths of a cohort model remain consistent and are enhanced in a hybrid learning environment (Rausch & Crawford, 2012).

Figure 1

Hybrid Learning Model
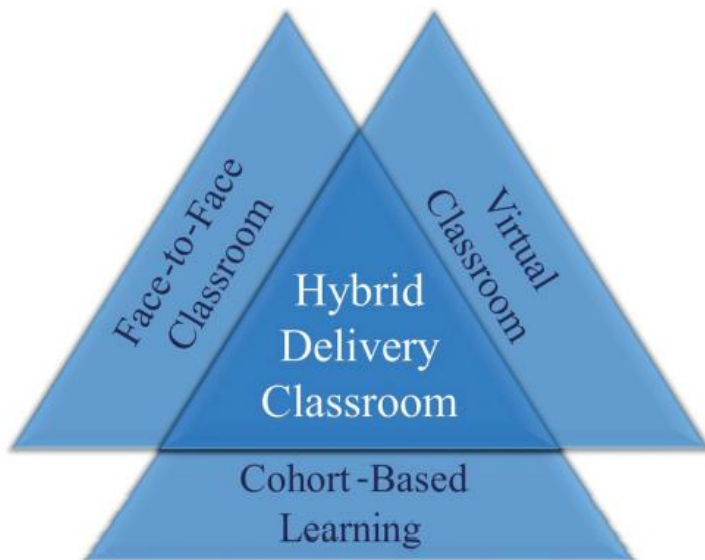
Conceptual Framework

The literature reviewed for this qualitative case study focuses on the seminal work of Lave and Wenger (1991) and their Community of Practice theory of learning. Cohort-based learning, which has grown in popularity and use in higher education since the late 1980s, reflects the characteristics of CoP from a social learning perspective, sharing in its benefits toward retention. As higher education doctoral programs have evolved to accommodate professional adult learners, the literature reflects that online learning has become a conventional program delivery method. Further, the hybrid learning model, which is a combination of face-to-face and online delivery, has become common. A hybrid cohort-based learning model supports the social learning aspects of how adults learn. Wenger et al. (2010) highlighted the role technology plays in providing a platform for a CoP. It is possible that technology can support either the community, the practice, or both.

C4P Framework for Communities of Practice

In keeping with the case study's focus on doctoral students enrolled in a hybrid cohort-based program, this study will be viewed through the lens of Hoadley and Kilner's (2005) C4P Framework for Communities of Practice as seen in Figure 1. The framework was originally designed to understand and build online communities of practice that enhance collective knowledge. However, Hodgkinson-Williams et al., 2008 suggested, "While their framework was developed for online communities, these elements seem to be present in communities of practice that are partially online and offline" (p. 4). This model is appropriate for a learning setting such as a hybrid cohort-based design.

First, the C4P framework is described as a way of understanding how knowledge is created and disseminated by participants in a community of practice. Hoadley and Kilner (2005)

posited that no matter the learning theory, communities provide opportunities for learning-whether deliberate learning or accidental adaptation. Sociocultural learning theory can be applied to either. The C4P Framework is specifically based on the social learning theory of Community of Practice as posited by Lave and Wenger (1991). The goal of knowledge-building CoPs is the development of individual and collective knowledge and learning, which are significantly accelerated in a CoP. Hoadley and Kilner (2005) developed their model to express how learning takes place stating that "knowledge is generated and shared when there is purposeful conversation around content in context" (p. 33).

Hoadley and Kilner's (2005) C4P Model for Communities of Practice suggests the online supported CoP consists of five elements: *content*, *conversation*, *connections* and (information) *context* which all support a common *purpose*. They state:

> The five elements of C4P feed off and reinforce each other. For example, content shapes conversations and fosters connections. Conversation generates new content and adds context to existing content. Connections spark conversations and add context to content. Information context connects content to related content and to the community's purpose. Purpose provides the meta connection between all the other elements.

While Hoadley (2012) suggests there are many techniques to support CoPs with technology, the strategies of the C4P model are illustrative of common ways people support CoPs with technology.

Figure 2

C4P Framework for Communities of Practice
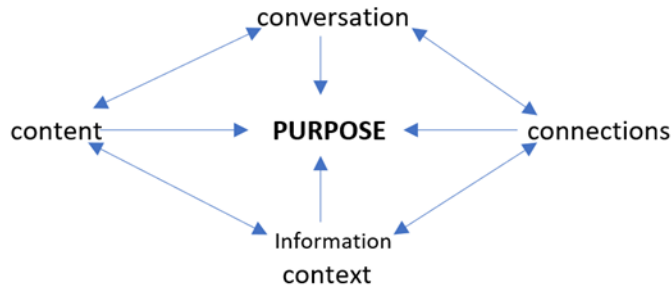
Purpose

      Hoadley and Kilner (2005) state that clarity of purpose "creates energy and produces results" (p. 34). A clear purpose is "why" members come together in a CoP. A CoP's purpose should inhere in every element of content, connection, and conversation which in turn provides valuable context. Shared purpose is a defining factor in collaboration and building community (Cohen, 1991; Woodruff, 1999). Without purpose, knowledge building and learning will flounder.

Content

      According to Hoadley and Kilner (2005, p. 33), content refers to "explicit, static knowledge objects" and involves "one-way communication of information". They further explain that content serves four purposes:

> It attracts members by providing immediate value; it socializes new members by implicitly communicating what kinds of topics and voices are appropriate; it serves as a basis for conversation; and it motivates members as they see themselves jointly building their domain of knowledge.

Technology can also be used in a CoP to support content by way of a shared repository of resources and access to fellow members' work, supporting legitimate peripheral participation as Lave and Wenger (1991) described. Discussion boards in Blackboard (n.d.) are one example of a resource for accessing the work of other students. This content impacts conversations which in turn contribute to connections, providing context to the information discussed.

Conversation

Conversation is defined as an information exchange between two or more parties and can be performed in person or via ICTs (Hoadley & Kilner, 2005). As Hoadley and Kilner (2005) note, when conversation is missing, "knowledge may transfer but is unlikely to be generated" (p. 33). Conversation facilitates the new idea generation that provides momentum for the group's activities. Technology can directly support conversation among members and is one of the most common uses of technology. In a hybrid cohort design, conversations benefit from not only the face-to-face classroom experience but are carried beyond the classroom and expanded with the use of technology such as Zoom (n.d.) or GroupMe.

Connections

Closely related to conversation is the notion of a connection. Hoadley and Kilner (2005) define connections as interpersonal contacts between members of the community, and describe this relationship saying, "Connections spark conversations and add context to content" (p. 33). If connections are missing, "there will be fewer contributions of content and conversation, and the contributions will have less context" (Hoadley & Kilner, 2005, p. 33). Andriessen (2005) posited that sharing a practice is not enough on its own to form a CoP; the members must have "connectivity," or what Hoadley and Kilner call "connections." Like conversations, various social networking tools such as Facebook or GroupMe can help form connections.

Context

Hoadley and Kilner (2005) define context as the "who, what, where, when, why and how that enables community members to assess whether and how information is relevant to them" (p. 33). Context provides the necessary information to team members in order to build and extend existing knowledge generated by the group. Technology supports CoPs by providing awareness of the information context of various resources. For example, the search engine within a university's library may offer various works within the context of the topic being researched.

Summary

A Community of Practice is an important construct supporting learning in a social environment where members learn by legitimate peripheral participation, building their membership status and identity within the CoP through situated learning. This type of learning relies on the idea that acquiring knowledge is dependent upon groups of people over time in shared practices rather than the idea that knowledge is a "cognitive residue in the head of an individual learner" (Hoadley, 2012, p. 299). The success of a cohort model of learning carries the common thread of social interactions or connectivity as found in CoPs. While online learning delivery has become commonplace in higher education, the need for connectivity is reinforced with a hybrid model of delivery, where cohort members meet face-to-face for portions of the program along with online delivery methods. To understand how doctoral students experience Community of Practice, it is important to view their experiences through the lens of technology and face-to-face interactions.

There are few studies conducted from the students' perspective of CoP, and there is a gap in the literature regarding the application of the C4P Framework to CoPs supported by technology in a higher education setting. Lave and Wenger's (1991) definition of a CoP suggests

CoPs are formed organically and fit the profile of Andriessen's (2005) correlated characteristics of high connectivity and low institutionalization (formality). While a CoP in its purest form is not typically created intentionally, it can be encouraged and supported in various ways. Understanding how doctoral students experience learning from the context of CoPs through the C4P Framework may further inform faculty and instructional designers in developing doctoral programs that best support doctoral students and have a positive impact on retention and student satisfaction.

Chapter III

Methodology

The purpose of this qualitative case study is to explore how doctoral students enrolled in

a hybrid cohort-based education program experience Community of Practice (CoP). This chapter

discusses the context of the study, the participant sample, the research rationale and design, data

collection and analysis methods, and the research approach. Ethical considerations, issues of

trustworthiness, scope, limitations, and delimitations are also reviewed.

Research Design and Rationale

Research Questions

The overarching research questions guiding this study are:

RQ1: How do doctoral students experience a hybrid cohort-based program?

RQ2: How do students describe their experiences of CoP in their program?

RQ3: How did CoP impact their academic journey?

Central Concept

This case study explores how doctoral students experience Community of Practice in a

hybrid cohort-based program. Attrition in doctoral programs remains between 50-70% (Lively et

al., 2021). Cohort models, whose design capitalizes on the connectivity and social learning found

in CoPs, have shown a positive impact on doctoral student retention.

Case Study Approach

Denzin and Lincoln (2011) posit that qualitative research situates the researcher within

the context of the world they are studying. Through various means including field notes,

interviews, conversations, photos, recordings, and memos to self, the qualitative researcher

studies things in their natural setting. In this way, the researcher tries to "make sense of, or

interpret, phenomena in terms of the meanings people bring to them" (p. 3). Creswell (2013) suggests qualitative research addresses the "meaning individuals or groups ascribe to a social or human problem" (p. 44) and agrees that data are collected in a natural setting to the people or places being studied. Creswell further states that data analysis is both inductive and deductive and establishes patterns or themes. Though there are many approaches a researcher may choose for a qualitative study, Creswell and Poth (2018) focus on five consistent approaches: Narrative Research, Phenomenology, Ethnography, Grounded Theory, and Case Study. The latter is the approach used for this qualitative study.

Qualitative case studies are prevalent in the field of education and have illuminated educational practice for decades (Merriam, 1998). Merriam (1988) defined a qualitative case study as "an intensive, holistic description and analysis of a single instance, phenomenon, or social unit" (p. 21). In her 1998 book, Merriam expanded her definition claiming that "the single most defining characteristic of a case study research lies in delimiting the object of study, the case" (p. 27). The case itself could be a person such as a student, teacher, or principal. A case can also be a class, a school, a community, a policy, etc. This approach is appropriate for studying doctoral students in an education program. Yin (2018) suggests that the case study approach seeks to explain a given contemporary circumstance by answering questions of "how" and "why" which correlates with this study's overarching research question: How do doctoral students experience CoP in a hybrid cohort-based education program? It makes sense to use a qualitative case study approach to explore the contemporary phenomenon of how doctoral students experience CoP and how their experiences with CoP impact engagement and retention within a hybrid cohort-based program.

Participant Selection

      This case study is bound by place, time, and context (Merriam, 1998). The site of the case study is a single university in the Southeastern region of the United States. Founded in 1871, the University of Arkansas comprises 10 colleges and schools and offers more than 240 academic programs, 50 of which are doctoral and specialist programs. The Carnegie Foundation classifies the university among only three percent of universities in America with the highest level of research activity (Carnegie Foundation for the Advancement of Teaching, 2022). Participants will be collected from one doctoral program in the College of Education and Health Professions (COEHP). The program has been identified as hybrid and cohort-based, with 75% of the program offered online and six face-to-face campus sessions per year.

      The most common form of qualitative sampling is purposive sampling (Merriam, 1998; Patton, 2015). This type of sampling allows the researcher to select samples that will provide the most information-rich samples from which the most can be learned. This sampling differentiates qualitative from quantitative research in that in-depth understanding and information-rich samples are not available in the random sampling associated with quantitative research. Purposive criterion sampling will be used for this case study. Criterion sampling is where participants are chosen because they meet a certain set of criteria as determined by the researcher (Bloomberg & Volpe, 2019).

      For this case study, the criterion for inclusion requires that a participant must be or must have been enrolled for a minimum of two full academic semesters in a hybrid cohort-based doctoral program in the COEHP between 2018 and 2023 at the chosen university. Lincoln and Guba (1985) recommended sampling to a point where saturation or redundancy is reached, meaning the sampling is terminated when no new information is forthcoming. Hennink and

Kaiser (2022) reviewed empirical studies that assess saturation in qualitative research to identify sample sizes for saturation. "In all 16 tests of saturation with data from in-depth interviews, saturation was reached in under 25 interviews, more specifically between 9 and 17 interviews excluding outliers" (Hennink & Kaiser, 2022, p. 7). Across all tests in this study, an average of 12-13 interviews reached saturation. Guest et al. (2006) conducted one of the first studies to empirically assess saturation and reported saturation at 12 interviews. Hennink and Kaiser's (2022) study results are consistent with Guest et al.'s (2006) findings. In this qualitative case study, a minimum sample size of 9 with a maximum of 12 will be sought to attain saturation.

With the permission of the dean of the COEHP, assistance will be solicited from department heads of hybrid cohort-based programs. With the support of the department heads, program coordinators and faculty members within each department will be asked to assist with providing contact information of potential participants.

Overview of Information Needed

This case study focuses on doctoral students in education at one university in the United States. Because this study seeks to understand how doctoral students experience Community of Practice, all participants must have been enrolled for a minimum of two full semesters, such as spring or fall, in an education program delivered in a hybrid cohort-based model. Three research questions will be used to explore these experiences. The answers to these questions will be interpreted through the lens of the C4P Framework for Communities of Practice (Hoadley & Kilner, 2005). This framework views CoP through five elements: 1) content; 2) conversation; 3) connections; 4) context (of information); and 5) purpose. It is through the lens of these five elements that this study will be conducted.

Data Collection Methods

Procedures for Recruitment

An email will be created and sent to all potential participants. The criterion for recruitment is that participants are or have been enrolled in a hybrid cohort-based doctoral program between 2018 and 2023. The body of the email will include an overview of the case study and its purpose of exploring how doctoral students experience CoP while enrolled in a hybrid cohort-based program. A brief questionnaire will be provided to gather basic demographic information such as name, program name, age, gender, best contact information, and geographic location. In addition, questions will be asked to determine if they meet the following purposive sampling criteria:

- Has been or is currently enrolled in a hybrid cohort-based doctoral program in the COEHP

- Enrollment occurred between 2018 and 2023

- Was enrolled for a minimum period of two full semesters

Directions will be given to return the survey to the researcher indicating a willingness to participate. The returned surveys will be reviewed, and purposive criterion sampling will be applied to select all who meet the criteria. Once the qualified participants are selected, a second email will be sent to confirm their participation along with an Informed Consent Letter.

Procedures for Participation and Data Collection

The researcher will schedule and conduct individual, in-depth interviews with each of the participants. Interviewing has become the most common source of qualitative data according to Charmaz (2015). Data are often collected through group or individual interviews and is necessary when the researcher cannot observe behavior, feelings, or how individuals interpret the

world around them (Merriam, 1998). The interview method for data collection provides the greatest potential for gathering rich, thick descriptions. Interviews may be defined as a "conversation with a purpose" (Dexter, 1970, p. 136).

Interviews vary in their structure. More highly structured interviews include predetermined wording and are much like an oral form of a survey. At the other end of the spectrum are unstructured and informal interviews, which include open-ended questions asked in a very flexible, exploratory, and conversational manner. Because a semi-structured interview is a hybrid of an unstructured and a structured interview, it benefits from both. During the interview, interviewees can express their opinions and ask questions of the interviewers, which encourages them to provide more useful information to the qualitative research, such as their views on sensitive issues. In addition, they could more easily explain their answers during the interviews. Furthermore, the structured portion of semi-structured interviews provides interviewers with reliable, comparable qualitative data (Knott et al., 2022). A semi-structured interview format will be used to explore how these students experience Community of Practice in their hybrid cohort-based program.

At the convenience of the participants, all interviews will be conducted and recorded via Zoom (n.d.) video conference. The duration of each interview is expected to be 45 to 60 minutes. The Informed Consent Letter previously sent to the selected participants will be reviewed with the participant before the interview. If consent is given, the interview will proceed. The interview protocol for the case study will be followed (Appendix B). Each interview will be recorded and transcribed using the Zoom (n.d.) platform. To ensure accuracy, the researcher will compare the transcriptions to the recording. Participants will be asked to review the transcriptions to ensure correct information. This will increase the credibility of the qualitative study.

Data Analysis Plan

To allow research findings to emerge from dominant and significant themes visible in raw data, a general inductive approach is used (Thomas, 2006). An inductive approach is described as "goal-free" because evaluators hope to describe actual program effects rather than expected effects as in goal-based evaluations (Scriven, 1991). To identify major themes, the transcripts will be read rigorously and methodically. Interview text segments will be coded to analyze segments relating to a specific theme, relationships between themes, and the importance of themes to the participants. The researcher will do this by following Bloomberg and Volpe's (2019) four steps of qualitative data analysis: 1) review the data and consider the overall meaning; 2) reread the data, code it, and organize it into categories; 3) identify and summarize key findings with participant quotations for inclusion in chapter four; and 4) analyze and synthesize findings by linking to research, insights, and experiences for inclusion in chapter five.

Ethical Considerations

Yin (2018) posits that qualitative case studies are far more demanding than any other research method, particularly because the data collection procedures are not routinized. Ethical dilemmas of data collection may involve dealing with private information shared by respondents. As Stake (1994) observed, "Qualitative researchers are guests in the private spaces of the world. Their manners should be good and their code of ethics strict" (p. 244). Whether the interview is highly structured or semi-structured with open-ended questions, it still represents risks and benefits to the respondents. Some questions may be painful for the respondents to answer, while for some it may be therapeutic. Patton (1990) pointed out that the interviewer's task is "first and foremost to gather data, not change people" (p. 354). A good interviewer should ask good

questions, be a good (and unbiased) listener, remain adaptive, have a firm understanding of the issues being studied, and conduct research ethically (Yin, 2018).

The University of Arkansas is committed to ensuring that researchers use safe, ethical practices when engaging in human subjects research (HSR). Prior to the inception of the study, the researcher will submit to the university's Institutional Review Board for approval per federal regulations and the institutional policy governing HSR.

Data Management

This study adheres to the Institutional Review Board standards of the University of Arkansas on the use of human beings as subjects for physical, mental and social experimentation, in and out of class. Every respondent will be informed of the study's goals, applications, and procedures via an initial email that includes an Informed Consent Letter (Appendix A). The letter addresses risks and benefits, confidentiality, how the results will be used, participant rights, and investigator verification of explanation (Bloomberg & Volpe, 2019). The researcher's ethical responsibility is to ensure that the nature or goals of the study are not misrepresented (Creswell & Poth, 2018).

To keep participants' results private and preserve anonymity, each will be assigned a pseudonym, and participant data will be stored in a password-protected location. Any discussion of the research or its findings will use the assigned pseudonym rather than the participant's name. Before beginning an interview, the consent form must be signed. The researcher will confirm that the consent form is signed before the interview and remind the participant that they can opt-out at any time. The researcher will reiterate that participation in the study is entirely voluntary and can be terminated at any time without consequence.

Trustworthiness

Credibility of the study begins with full transparency on the researcher's part. As a doctoral student enrolled in a hybrid cohort-based program, I have my own opinions and experiences with Community of Practice in my cohort. At the beginning of my research, I realized I had assumptions about how CoP may be experienced, not only by myself but by the future participants of the study. I counteract those assumptions by consistently checking with the professors on my committee to ensure my biases and assumptions do not interfere with the progression of the study. To further ensure credibility and accurate interpretation of the data, I will utilize the following strategies:

- Member Checks: During the interview, I will periodically restate or summarize information to check for accuracy. Member checks after the study are completed by sharing all findings with the participants involved, allowing critical analysis and participant feedback. This is "the most critical technique for establishing credibility" (Lincoln & Guba, 1985 p. 314). Should comments be submitted, this information would be included in my findings.

- Peer Debriefing: This is accomplished by asking trusted thought partners such as peers and classmates in my own program as well as faculty within and outside my department to review the data and engage in discussion to help me identify and examine my assumptions as well as help me consider other perspectives for interpreting the data (Creswell & Poth, 2018).

The case study method was chosen for its advantages and because it is an especially appealing design for applied fields of study such as education. Educational processes, problems, and programs can be examined to gain understanding, which can then influence and possibly

improve practice (Merriam, 1998). Further, the review of the literature also reflects that case studies are consistently used for this subject matter. Before conducting official interviews, three to five pilot interviews will be conducted to help further develop relevant lines of questions (Yin, 2018) in the interview protocol. To confirm objectivity of the interpretation of the research, peer review of the interpretations will be conducted. Purposive criterion sampling helps provide thick description of the phenomenon.

Limitations and Delimitations

Limitations of this study include voluntary participation which could result in a small number of participants that may not represent the entire population. In addition, the study is conducted in the College of Education and Health Professions at a single university in the Southeast region of the United States. Though interviewing is a common method of data collection in qualitative research, the interviewees may vary in cooperation, articulation, and understanding of the topic (Bloomberg & Volpe, 2019). In general, qualitative research involving interviews requires preparation and skill on the interviewer's part. If the interviewer is not well prepared, the data gathered may be inconsistent. This may lead to an unintentional misrepresentation of the phenomenon. Lastly, as a doctoral student enrolled in a hybrid cohort-based program, my own bias may constrain the research. Delimitations of this study are that the participants must be or have been enrolled for a minimum of two full semesters in a hybrid cohort-based doctoral program between 2018 and 2023.

Summary

This chapter began by restating the purpose, design, and research questions of the study. This chapter also provided a detailed description of the research methodology. Qualitative case study methodology will be used to explore how doctoral students from a single university

experience Community of Practice while enrolled in a hybrid cohort-based program. The literature confirms that case study is an ideal research method in an educational setting. This chapter reviewed the setting, sampling approach, interview protocol, and practices to ensure ethical standards were met along with trustworthiness. Lastly, limitations and delimitations of the study were discussed.

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Appendix A Informed Consent Letter

Dear Participant:

As a doctoral candidate at the University of Arkansas, I am in the process of conducting a study entitled *Doctoral Students' Experiences of Community of Practice in a Hybrid Cohort-based Program: A Case Study*. My study is seeking to primarily answer research questions related to how doctoral students experience community while enrolled in a hybrid cohort-based program. The primary method for data collection is semi-structured individual interviews. Each interview is scheduled to last approximately forty-five to sixty minutes. The interviews will be conducted and recorded via zoom and professionally transcribed.

Your participation in this qualitative case study will assist me in adding knowledge to the field of Higher Education regarding how Community of Practice is experienced by doctoral students in a hybrid cohort-based program. The data obtained from this study will be useful to help identify trends and best practices to positively impact doctoral retention and program completion. Although your participation will help us to better understand your experiences, this study will not benefit you personally.

Your participation is completely voluntary. If you wish to decline to answer certain questions or withdraw from the study at any time, you may do so without prejudice or penalty, and the information up to that point will be destroyed upon request. Because your interview responses will be confidential and stored in a secure location, there are no risks. You will not be identified in any reports or publications related to the study; a pseudonym will be used. Should I need additional information or clarification, I will contact you via email. You may email your response to me. The results will be analyzed in terms of themes and patterns. Summaries of the information from all participants will be included in the final chapters of the dissertation.

I look forward to your participation in this study, as your interview responses are extremely important to the research. Please do not hesitate to contact me if you have any questions or concerns. Your time and effort with this study are greatly appreciated!

Respectfully,

Niki Avery
Doctoral Candidate
University of Arkansas

AUTHORIZATION: I have read the above and understand the discomforts, inconvenience, and risk of this study. I agree to participate in this research. I understand that I may withdraw from the study at any time. I have received a copy of this informed consent letter for my own records.

_____

1. Participant Name (PRINT)

_____   _____

2. Participant Signature   Date

_____

3. Investigator Name (PRINT)

_____   _____

4. Investigator Signature   Date

Appendix B Interview Protocol

Doctoral Students' Experiences of Community of Practice in a Hybrid Cohort-based

Program: A Case Study

As a part of a hybrid cohort-based program, your coursework design was both in person and online.

1. How do you perceive being in a cohort impacted your experience?

2. Tell me about your relationships with the members of your cohort.

3. Describe your interactions and the things/nature of things discussed among members.

4. How did the group dynamics change from the beginning of the program to now?

5. Are there other things you would like to share about your experience within the cohort or its members?

6. How, where, and how often did you communicate with other cohort members?

7. What types of conversations took place?

8. What kind of information was generated and exchanged between members?
   a. What did you personally learn from that information/content?
   b. How did you apply what you learned?

9. Do/did you feel connected to your fellow cohort members?
   a. Can you share some examples of how you feel/felt connected?
   b. What is an example of your best experience in a hybrid cohort-based program?
   c. What is an example of your least favorite experience?

10. How did being a member of a cohort affect your doctoral journey?
    a. What impact did being a member of a cohort have on feelings of isolation?
    b. How did membership in a cohort impact your persistence?

11. Do you feel you learned from your cohort members as well as from the coursework? Please share some examples.

12. How might your experiences have been different had you not been part of a cohort?