

ONLINE TUTORING AT COMMUNITY COLLEGES

by

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## ABSTRACT

Educational institutions were severely challenged to shift online instruction to accommodate non-site-based learning because of the COVID-19 pandemic beginning in the spring of 2020. Faculty and institutions needed more resources to accommodate online tutoring and support services to the capacity needed during the pandemic. Thus, they were motivated to change their levels of online student support as one critical tool to increase student retention and completion. Post-pandemic, we can examine the best online tutoring practices. The purpose of this study was to describe and analyze the best practices in online tutoring that have positively impacted student success in community colleges. Semistructured interviews were conducted with eight community colleges that have robust online tutoring programs to discover their best practices for online tutoring. Three themes emerged as institutions shared their best practices: the importance of stakeholders' support, institutional engagement, and standards for tutoring programs. Many synchronous tools and supports were used to meet varied campus needs. Some institutions interviewed utilized platforms that fulfilled multiple campus needs, such as academic advising, financial aid, and tutoring in one software package. Two areas essential to improving online tutoring programs were having a well-developed tutor training program and using embedded tutors. These findings indicate the need for future exploration of online tutoring support for community college students so that institutions work to eliminate barriers to student success and completion.

**KEY WORDS:** Online tutoring, academic support, community college, online learning

## DEDICATION

This dissertation is dedicated to my beautiful parents, Art and Sharon Saucedo. They instilled in me the value of education and hard work. They were both lifelong learners who inspired me and countless others not only by their words but by their actions. They sacrificed, never complained, and always put their family above their own needs. They left a legacy of love, kindness, and an example for all to follow.

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## TABLE OF CONTENTS

	Page
LIST OF TABLES.....	vii
CHAPTER ONE: INTRODUCTION.....	1
Overview to the Study .....	1
Background of the Problem.....	1
Overview of Typical Community College Students.....	4
Reasons for Online Enrollment .....	4
Serving the Needs of Community College Students .....	5
Barriers to Success for Online Students .....	5
Student Engagement.....	6
Technical Difficulties .....	6
Access to Support Services .....	7
Statement of the Problem.....	8
Purpose of the Study.....	9
Significance of the Study.....	9
Research Questions.....	9
Delimitations.....	10
Limitations .....	10
Description of the Study Design.....	11
Organization of this Dissertation .....	12
Definition of Terms .....	12
Chapter Summary .....	13
CHAPTER TWO: LITERATURE REVIEW.....	15
Introduction.....	15
Online Learning Within the Community College .....	15
Impacts of COVID-19 on Online Learning .....	16
Student Engagement Research as the Framework for the Study .....	18
Community in Online Learning.....	18
Support Services for Online Learners.....	22
The Role of the Online Tutor.....	25
Peer Tutors.....	29
Supplemental Instructors .....	30
Embedded Tutors.....	31
Faculty and tutor Presence in online courses.....	31
Pedagogical Practices .....	35
Synchronous Online Learning .....	35
Asynchronous Online Learning.....	38
Asynchronous Versus Synchronous Learning.....	39

Chapter Conclusion .....	40
CHAPTER THREE: METHODOLOGY .....	42
Introduction.....	42
Statement of Purpose .....	43
Research Questions .....	43
Research Design and Rationale .....	44
Value of Qualitative Research.....	44
The Qualitative Case Study .....	45
Sampling Method and Selection of Study Sites .....	46
Institution Selection Criteria.....	49
Instrumentation and Data Collection .....	50
Data Analysis.....	53
Trustworthiness, Validity, Quality, and Reliability.....	56
Credibility.....	57
Transferability .....	58
Dependability .....	58
Confirmability .....	58
Quality and Rigor .....	59
Validity and Reliability .....	59
Ethics .....	60
Role of the Researcher.....	61
Chapter Summary .....	61
CHAPTER FOUR: RESULTS AND ANALYSIS.....	62
Introduction.....	62
Institutional Profile .....	62
Research Question 1 .....	63
Research Question 1 Results .....	63
Support from Stakeholders .....	64
Institutional Engagement.....	66
Standards for Tutoring Programs .....	67
Research Question 1 Analysis .....	68
Research Question 2 .....	70
Research Question 2 Results .....	70
Tutor Training .....	70
Embedded Tutors.....	71
Research Question 2 Analysis .....	72
Research Question 3 .....	75
Research Question 3 Results .....	75
Research Question 3 Analysis .....	78
Research Question 4 .....	79
Research Question 4 Results .....	79
Research Question 4 Analysis .....	81
Conclusion .....	83



CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS .....	84
Introduction.....	84
Summary of the Research Study.....	84
Key Findings.....	85
Research Question 1 .....	85
Conclusions .....	86
Implications .....	88
Research Question 2 .....	89
Conclusions .....	89
Implications .....	90
Research Question 3 .....	91
Conclusions .....	91
Implications .....	92
Research Question 4.....	93
Conclusions .....	93
Implications .....	93
Limitations of the Study .....	94
Delimitations and Recommendations for Further Study .....	95
Conclusion .....	97
REFERENCES .....	98

## LIST OF TABLES

	Page
Table 1: Attributes for Presences in Online Classes .....	34
Table 2: Case Study Sites .....	50
Table 3: Respondent and Tutoring Platform Profile.....	63

## CHAPTER ONE: INTRODUCTION

### **OVERVIEW TO THE STUDY**

In the context of the recent COVID-19 pandemic, community colleges have dramatically increased their online course and degree offerings. Community colleges simultaneously grapple with low success rates in online courses — 10% to 20% lower than face-to-face classes (Herbert, 2006). Research on online tutoring practices, a key support system to retain students in community colleges, has been primarily limited to face-to-face modalities. This study examined six community colleges' best practices in their online tutoring programs to assist my institution, Harper College, develop best practices for a comprehensive online tutoring program. I conducted semi-structured interviews with community college staff to understand participants' experiences with online tutoring. The institutional practices in this study were examined in three areas of utilization: synchronous and asynchronous tools and supports, commercially available tutoring tools and supports, and in-house college tools and supports. These three key elements in online academic tutoring have been attributed to greater student success and retention in online learning.

### **BACKGROUND OF THE PROBLEM**

The World Health Organization (2020) declared the spread of COVID-19 as a global pandemic on March 11, 2020. This public health crisis impacted daily life worldwide. American students, educators, and administrators worked rapidly to put distance learning programs into

place. Bozkurt et al. (2020) explain that the pandemic has “led to one of the biggest opportunities for innovation in education in human history. In nearly every country and territory, teachers have needed to find ways to support their students’ learning outside of the physical classroom” (p. 6). All educational institutions, including community colleges, rapidly shifted to online instruction during the COVID-19 pandemic (Hart et al., 2021). In the fall of 2020, the *Chronicle of Higher Education* and Davidson College surveyed 3,000 colleges and found 44% of higher education students were fully or primarily enrolled online with 27% of students enrolled fully or primarily in-person (Chronicle of Higher Education, 2020). As the demand for online courses increased, low retention rates in online courses and programs have also concerningly increased (Bawa, 2016).

The National Center for Education Statistics (NCES; n.d.b.) reported that in the fall of 2020, 69.5% of students at public two-year colleges took at least one online course. This is a significant difference when comparing the previous year, the fall of 2019, when the NCES (n.d.a) reported that 36.5% of students at public two-year colleges were taking at least one online course. The COVID-19 pandemic radically increased pressure on America’s colleges and universities to review the model of traditional campus-based lectures that has changed little in hundreds of years (Gallagher & Palmer, 2020). With this dramatic shift to online instruction, community colleges needed to find ways to assist their students navigate and to be successful in online classes. Past research indicates that community college students are most at risk of lower academic performance when taking online courses (Jaggars, Edgecombe, & Stacey, 2013; Jaggars & Xu, 2010; Xu & Jaggars, 2011). Gallagher and Palmer (2020) state, “Education is one of the least digitized and most people-intensive economic sectors — suggesting that the opportunity for risk of technology-driven disruption is strong” (para. 4).

While facing the impact of the global pandemic, enrollment at community colleges has been declining in recent years; spring 2021 indicated a 9.5% decline, which was three times steeper than the 3.4% decrease in overall enrollment (National Student Clearinghouse Research Center, 2021) from the previous year. In the spring of 2021, the 18-24 age group of students at community colleges had the steepest decline of enrollment, 2.4 million students, which was a 13.2% decrease from the previous year (National Student Clearinghouse Research Center, 2021).

The COVID-19 pandemic forced change in many aspects of our lives, including education (Govindarajan & Srivastava, 2020). Historically, community colleges have had to change to meet the needs of the diverse student populations that they serve. The community college system has sought to offer instruction at a lower cost, provide open admission, and design a flexible instructional schedule to accommodate those who could not attend school full time (Goldrick-Rab, 2010). Distance learning programs, a term used interchangeably to include both site-based and online formats, were created to provide education to parts of the world for those who could not attend classes in-person at a campus (Kizilcec, 2015). The evolution of online rather than site-based learning in the community college has revolutionized and disrupted educational technology, which has allowed a multitude of students to go to school who would previously have not been able to take in-person classes (Bawa, 2016). Straumesheim (2016) explained that community colleges have embraced online education to a much greater degree than four-year institutions. Community colleges have demonstrated their ability to shift with societal changes by offering educational training that is compatible with a student's lifestyle (Hachey et al., 2014). The community college system can optimistically convey the message to students that they can balance their education, work, and family obligations.

## **OVERVIEW OF TYPICAL COMMUNITY COLLEGE STUDENTS**

Fall 2020 data from the National Center for Education Statistics showed that of the 12.4 million students attending public undergraduate institutions, 38% of them attended public two-year schools. The demographics of a community college student compared to their public four-year and private nonprofit counterparts are markedly different (Fishman, 2015). According to Fishman (2015), the community college student is more likely to attend school part time, have an annual income less than \$30,000, commute to school, have one or more children, and work more than 20 hours per week. Students at community colleges are juggling many obligations and taking classes. Gierdowski (2019) reports that community college students are older, more often employed, and twice as likely to be married or in a domestic partnership compared to their four-year peers. The National Center for Education Statistics (2018) reports significant demographics of community college students, including that 29% are first generation to attend college, 20% are students with disabilities, 15% are single parents, and 5% are veterans.

## **REASONS FOR ONLINE ENROLLMENT**

According to the American Association of Community Colleges (2020), the average age of the community college student is 28 years old. The population of community college students includes more women than men living on their own with dependents (Gierdowski, 2019). Adult learners enroll in online courses because they are a valuable and viable option, given the numerous commitments they have outside academia (Travers, 2016). Gierdowski (2019) also identified that online or blended learning environments are preferred for those community college students who are juggling responsibilities. For adult learners, there can be many life responsibilities that they are juggling; however, if they enroll in an online course with misconceptions relating to cognitive load, it may impede students' success (Bawa, 2016).

## **SERVING THE NEEDS OF COMMUNITY COLLEGE STUDENTS**

Because of student lifestyle demands and requirements imposed by the COVID-19 response, community colleges have embraced online education to serve their student population and concurrently have been challenged to provide the depth, breadth, and support needed for their student population (Brown et al., 2020). Brown et al.'s 2020 report, "Harper College: Distance Education Consultant Report," noted the concern for "overpromising" online course delivery without adequate wrap-around support for students. This caution by Brown et al. mirrors the national community college concern for the delivery of comprehensive and successful online courses and programs (Protopsaltis & Baum, 2019). Community colleges have traditionally served a broad spectrum of students from various backgrounds and degrees of postsecondary preparation. They continue to accept and confront new challenges to serve their populations successfully.

### **Barriers to Success for Online Students**

According to Allen and Seaman (2015), in 2014, 97% of two-year institutions offered online courses. Jaggars (2011) presents various reasons why students struggle in online courses including technical difficulties, increased social distance, lack of structure inherent in online courses, and minimal to nonexistent access to off-campus supports such as tutoring. Crawford and Persaud (2013) explain that barriers for online community college students include lack of student engagement, technical difficulties, and lack of structure and support services.

Bawa (2016) presents key factors that contribute to high attrition rates for online courses including misconceptions relating to cognitive load, social and family factors, motivational factors, technological constraints, lack of digital natives, the lack of instructor understanding of online learners, faculty limitations of using technology, and faculty training. With the rapid rise

and continuing demand for online course enrollment comes a growing concern over the low retention rates in online courses and programs (Bawa, 2016). The key elements of this study focused on areas of concern for student success for tutoring within online courses including student engagement, technical difficulties, and access to support systems.

### *Student Engagement*

Students have stated that they often feel isolated and disconnected in an online environment (Crawford & Persaud, 2013). This feeling of isolation has caused students to drop out of courses and not persist. Barger (2019) states “retention rates are higher for students who feel engaged and receive necessary support” (para. 2). The online course environment can be challenging to foster interaction and engagement (Glazier, 2016). Positive interactions with the instructor can be a way to offset the feelings of isolation, which can be a major influence on student success (Arbaugh, 2008; Eom et al., 2006; Marks et al., 2005).

### *Technical Difficulties*

According to Crawford and Persaud (2013), online community college students frequently expressed frustration with their computer abilities and system failure. If students have technical computer issues at the beginning of the course, they may remain uncomfortable with technology and choose not to persist (Bawa, 2016). Students who are taking online courses may be savvy concerning games and social networking tools, but they may not have the academic skills to do well in online classes (Christ, 2007). Online learners who are often limited in time will not have patience for system glitches (Barger, 2019).

Bawa (2016) explains that high attrition rates in online courses are based on ineffective course designs that, in their design, make assumptions about the technical abilities of the student. Instructors often credit students with more capabilities concerning technology than the students



possess (Bawa, 2016). According to Crawford and Persaud (2013), online community college students frequently expressed frustration with their computer abilities and system failure.

### *Access to Support Services*

Community colleges frequently serve populations that are high-risk, first-year college students who need tutoring assistance to help with coursework and prepare for college level exams. Jaggars, Hodara, and Stavey (2013) explain that approximately 60% of high school graduates enter community college requiring some form of remedial education with some students requiring multiple semesters of remedial instruction. At community colleges, over two-thirds of the students take at least one developmental course (Ganga et al., 2018). It is imperative that institutions understand a student's readiness to participate in an online environment. Online students may have the same or a greater need for accessible online tutoring support compared to their face-to-face counterparts who have access to support services when they are on campus. Here, access due to location is a key concern for online students because of their inability to access on campus resources.

Higher education institutions that were early adopters of online programs also tend to be the leaders in providing virtual support services for their students (Barger, 2019). A study by North Carolina State University polled 50,097 students at ten community colleges across the United States and found that online students frequently do not have the same access to support services as on-campus students do. To improve a student's success in online courses, instructional support may help online students and alleviate concern students have about online courses (Porter & Umbach, 2019). There is a need for community colleges to find innovative ways to utilize technology to assist students in multiple, synchronous, and asynchronous communication formats.

Institutions should anticipate that students will continue to take courses online because of its flexibility and other benefits (Nworie, 2021). A student's online experience is not dependent only on the quality of instruction, but also on the support resources available to them (Nworie, 2021). Dawson et al. (2021) explain that expanding student supports for community college students may be the key to improving student outcomes. Students who take classes online still need the support that is provided to campus-based students (Nworie, 2021).

### **STATEMENT OF THE PROBLEM**

Beginning in the spring of 2020 because of the COVID-19 pandemic, educational institutions were severely challenged to shift to online instruction to accommodate non-site-based learning. Community colleges made the abrupt adjustment and, as a result, many faculty were faced with the immediate need to transition their face-to-face formats to an online presence. For those with online teaching experience, this was accomplished in a timely manner, while for those without online teaching experience, the transition proved challenging and required in-house college instructional design and technological support. Institutions that were slow to embrace online instruction prior to the pandemic were now forced to quickly prepare and train faculty and to provide technical and academic support to students (Hart et al., 2021). Campus teams to support faculty teaching online were stretched to capacity with the abrupt shift to online learning (Hart et al., 2021). Faculty and institutions did not have the resources to accommodate online tutoring and support services to such a capacity and were thus motivated to change their levels of student support in online classes as one critical tool to increase student retention and completion.

## **PURPOSE OF THE STUDY**

Educators need to re-evaluate traditional strategies that have been used in online courses and find ways to integrate curriculum, technology, community, and learning in a way that supports online students (Fisher & Baird, 2005). Tutoring allows students to receive additional instruction, practice, and one-on-one support. Online tutoring provides online students with academic support that is effective and interactive (Rennar-Potacco, Orellana, Salazar, 2017).

This research project aims to identify best practices utilized by several community colleges' online tutoring programs to aid community colleges in developing a comprehensive online tutoring program. The study seeks to understand what tools and supports are being utilized to improve online student learning and success at community colleges and to learn how to expand the access to online tutoring services to mirror face to face access to services.

## **SIGNIFICANCE OF THE STUDY**

Very little research has been done to understand the best tools and practices for online tutoring at community colleges. The findings of this study will help community colleges understand best practices of online tutoring to support online students. The information provided by the study could be used to develop or improve an existing online tutoring program at a community college. The study will also provide information for the online tutoring program offered at my institution, Harper College.

## **RESEARCH QUESTIONS**

The research study examines the following from the vantage point of the community college faculty and staff to understand how community colleges can improve student learning and success in online classes. The four overarching questions to be answered were:

1. What best practices can community colleges use to improve learning and success for online courses using online academic tutoring?
2. How are in-house tools and supports used to improve learning and success?
3. How are synchronous tools and supports used to improve student learning and success?
4. How are commercially available tutoring tools and supports used to improve student learning and success?

## **DELIMITATIONS**

This study was limited to six community colleges: Austin Community College, College of DuPage, Long Beach City College, Miami Dade, Montgomery County College, and Santa Rosa Junior College. These community colleges were intentionally selected because they had online tutoring programs that were noted in research or that I had found through purposeful sampling. Through my participation in the Open Forum for Learning Assistance Professionals listserv, I identified two additional respondents for the study. I utilized schools that were using various programs and methods to provide online tutoring to students. The schools selected may have utilized internal or external tutoring programs or a mixture of both internal and external. The study was done in the winter of 2022, which required the research to follow protocols that were in place because of COVID-19.

## **LIMITATIONS**

The qualitative study's limitations included the study's sample size and my personal biases. The study was limited to the schools that I identified and interviewed. The representatives of the colleges interviewed are a small sample size of a larger population. I was the primary instrument for data collection and analysis and provided a subjective lens for the data collected (Bloomberg & Volpe, 2016).

Reflexivity in research is defined by Roulston (2010) as “the researcher’s ability to be able to self-consciously refer to him or herself in relation to the production of knowledge about research topics” (p. 116). I work at an institution where online tutoring is being utilized. I acknowledge the personal biases and experiences that I bring to the study.

## **DESCRIPTION OF THE STUDY DESIGN**

The purpose of the research is to understand the best practices used in online tutoring programs to support online learners at community colleges. The approach used for this qualitative research is a case study. A qualitative case study approach is defined by Baxter and Jack (2008) as an approach that facilitates the exploration of a phenomenon utilizing a variety of data sources. Anderson describes a case study as explaining how and why things happened and allowing investigation of what was planned with what occurred (as cited in Noor, 2008). A case study permits the researcher to look at the aims and goals of online tutoring and then understand what practices were implemented to increase students’ success. I investigated successful online tutoring programs at community colleges to seek commonalities in practices.

For this research, a multicase study was performed that highlighted examples of best practices on online tutoring at community colleges. Merriam (1998) notes that the single most defining characteristic of a case study is that the object of the case study is limited and has boundaries. I used collection methods from multiple sources, including semistructured interviews and artifact documents (Creswell, 2007). I conducted semistructured interviews to understand participants’ personal experiences with online tutoring. Obtaining information from a case study provided valuable information that can be used to enhance and improve the synchronous online tutoring offerings at my institution and at other community colleges.

Another reason that the case study methodology was used is that Merriam (1998) reports that case studies have proven useful for studying educational innovations and have been able to assist in informing educational policies. A case study can provide the researcher with insight that can be utilized to structure future research to advance the knowledge base in the field (Merriam, 1998). Research specifically on best practices utilized in online tutoring can provide insight that can assist other community colleges that may be interested in offering a form of online tutoring.

### **ORGANIZATION OF THIS DISSERTATION**

This dissertation is organized into five chapters. The first chapter introduces the study, the background of the problem, a statement of the problem addressed by the research, and a discussion of the purpose of this study. A brief overview of the study's design is presented with the research questions being investigated.

Chapter Two provides a review of the literature that is the basis of this study. Chapter Three describes the study's methodology. Chapter Four describes the findings of the study based on the six community colleges I selected. Chapter Five is a summary of the study and presents the conclusion and recommendations for the future development of online tutoring programs at community colleges based on the study. The findings presented were those that were vital to online tutoring programs improving students' success.

### **DEFINITION OF TERMS**

To provide a better understand of the study, the following terms are defined:

Academic support center (academic support office): Areas on campuses designed to address student needs for success (Aucutt, 2021).

Asynchronous learning: Learners log on to their learning environment at any time and download materials or send messages to peers or teachers. Learners and teachers are not online at the same time (Hrastinski, 2008a).

Distance education:

Education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously. Technologies used for instruction may include the following: Internet; one-way and two-way transmissions through open broadcasts, closed circuit, cable, microwave, broadband lines, fiber optics, satellite, or wireless communication devices; audio conferencing; and video cassette, DVDs, and CD-ROMs, if the cassette, DVDs, and CD-ROMs are used in a course in conjunction with the technologies listed above. (National Center for Educational Statistics, 2022, para 4)

Distance education is also called distance learning, e-learning, and online learning (National Center for Educational Statistics, 2022, para 4).

Distance learning: The main elements of distance learning include physical separation of teachers and students during instruction. The students and teachers communicate using various technologies (Simonson & Berg, 2016).

Online tutoring: “Online tutoring is a form of teaching, usually one-to-one, that takes place over the internet in real time” (Williams, 2021, para. 6).

Synchronous learning: Learners and teachers are online together at the same time and are supported by a media platform such as chat or videoconferencing (Hrastinski, 2008).

## **CHAPTER SUMMARY**

The COVID-19 pandemic upended our daily life worldwide, and higher education in its immediate need to serve students had to make a dramatic shift from traditional course delivery to online courses. The problem investigated through this study is that online students have several

issues that interfere with student success, and thus support services such as tutoring are critical so that they can successfully complete courses. Online students need access to support services comparable to students who attend on-campus classes (Brown et al., 2020).



## CHAPTER TWO: LITERATURE REVIEW

### INTRODUCTION

This chapter reviews literature as it pertains the best practices of community colleges that offer online tutoring to support their online learners. The research was guided by the online environment of the community college; how students, faculty, and staff are learning and interacting in the online environment; and particularly how students, faculty, and staff, including tutors, have communicated in the online environment. This study sought to understand the tools and supports that were used by eight community colleges for online tutoring to improve student learning and success.

### ONLINE LEARNING WITHIN THE COMMUNITY COLLEGE

Early research on the benefits of online learning began with Meyer in 2006. Meyer's (2006) research found that online education has the ability to bring efficiencies to community colleges and teach more students. The research of Jaggars and Xu (2010) and Xu and Jaggars (2011, 2013) looked at course dropout rates and grades in online courses compared to face-to-face classes. Their research found that community college students in Washington State and Virginia had higher course dropout rates and lower grades in online courses compared to face-to-face classes. A study by Johnson and Mejia (2014) of California community colleges examined the enrollment trends in online learning and success of students in online courses compared to traditional courses.

Research has shown that online community college students need to have an opportunity to make a connection and feel a sense of community at their institution. Tukilayeva and Gonyea (2014) explain that it is essential that students have shared intellectual experiences with faculty and peers that provide personal and intellectual growth, which leads to student success. At many institutions, online tutoring has been shown to provide students a shared intellectual experience. Levy (2017) explains that to increase success in online learning, community colleges must focus their efforts on increasing access, enhancing online pedagogies, maintaining strong teacher presence, and expanding the student and faculty support systems to foster student success. Brown et al. (2020) state that providing high-quality online tutoring for students is a support tool that is a must for student success.

A recent study supporting this premise was conducted by Francis et al. (2019) with 2,400 students in developmental math courses in community colleges to understand if students enrolled in online courses achieved lower academic outcomes than students enrolled in face-to-face courses. This research also found that online learners received lower course grades, lower pass rates, and higher withdrawal rates than their classmates in face-to-face courses.

### **IMPACTS OF COVID-19 ON ONLINE LEARNING**

There were many lessons that can be taken away from the COVID-19 pandemic that will impact the future of higher education. In a study by Global Strategy Group (2020) of 1,407 college students to understand the educational challenges and enrollment decisions that they faced due to the coronavirus pandemic, three findings emerged: (1) student needs are not fully being met during the switch to online and beyond; (2) student enrollment, retention, completion, and transfer plans remain cautiously steadier than anticipated; and (3) students have significant

worries about the economic fallout from COVID-19 and the resulting value of a higher education credential.

Global Strategy Group (2020) surveyed college students during the COVID-19 pandemic to understand the challenges and enrollment decisions that they are making due to the pandemic. Of the 1,407 they surveyed, they found during the pandemic, 26% of college students were employed either part time or full time. Among this group, 52% of college students were working jobs that were deemed “essential.” Global Strategy Group (2020) also stated that a substantial number of minority students were deemed “essential” employees. Many community college students are in the essential employee category, which includes employees of grocery stores, pharmacies, convenience stores, hardware stores, and medical supply stores. Levin’s study (2020) supported these results, also finding that the pandemic has caused financial hardships and provided technological hurdles to online college learners seeking to complete courses at higher education institutions. Financial concerns, changing workplace commitments and requirements, and lack of technological capacity have impacted student retention. Students who rely on face-to-face connections at their college often withdraw from courses (Levin, 2020).

Xu’s (2020) study examined whether students attending online courses were more likely to withdraw from courses compared with students taking face-to-face classes. Xu’s (2020) study found online community college students are between 3% and 15% more likely to withdraw from an online course compared to similar students taking face-to-face courses. The pandemic created added stress and obstacles to college students who have limited time to dedicate to their schoolwork because of their responsibilities outside school.

After this unprecedented time in higher education, future research and insight will determine what was learned as a result of the rapid shift to online instruction. Russ Poulin,

executive director of the WICHE Cooperative Educational Technologies states, “The COVID-19 shake-up was very healthy because it made a lot of faculty members think about what they are they are doing in their courses. Faculty are taking what works for them and their students and leaving the rest” (McKenzie, 2021 p .17). A survey by Johns and Mills (2021) revealed that 87% of the respondents were considering or fully intending on continuing online tutoring after COVID-19 pandemic restrictions were removed. The impact of COVID-19 on online learning will continue to be examined in years to come

## **STUDENT ENGAGEMENT RESEARCH AS THE FRAMEWORK FOR THE STUDY**

### **Community in Online Learning**

The studies in this section relate to creating a sense of belonging and camaraderie in an online learning environment and its impact on the students. Online tutoring provides a technological platform of student engagement whereby students are connected to a community of people: faculty, resource staff, and/or other students to support their learning. It is valuable to understand how a sense of community, or a sense of belonging can be created for online students in an online tutoring session. Early research by Lock (2002) provided educators with guidelines for developing online learning communities that fall into two categories: creating online communities and sustaining online communities. Lock’s research (2002) concluded that the members of the online learning community need to accept new responsibilities and roles and explained that an online learning community is influenced and sustained by the initiative of members and the leadership of the online community. An online learning community was defined by Ludwig-Hardman (2003) as “a group of people, connected via technology-mediated communication, who actively engage one another in collaborative, learner-centered activities to

intentionally foster the creation of knowledge, while sharing a number of values and practices” (p. iv).

McClenney et al. (2012) provide five benchmarks of effective community college educational practices related to measurable outcomes for student engagement. Two of these five measures were active and collaborative learning and student-faculty interaction, and both benchmarks measure how students actively process the learning experience with others. McClenney et al. (2012) explain that students learn more when actively involved in their education and engage with their classmates. The other measure was student-faculty interaction, which McClenney et al. (2012) explain as “the extent to which students and faculty communicate about academic performance, career plans, and course content and assignments” (p. 5). Gray and DiLoreto (2016) studied online learning and the relationships among course structure/ organization, learner interaction, student engagement, and instructor presence on student satisfaction and perceived learning. Their results found that student interaction did not have a statistically significant impact on student satisfaction; however, instructor presence did have a statistically significant impact on perceived student learning.

Shea (2006) conducted a study of 2,036 participants who studied online in the summer 2004 semester across 32 State of University of New York (SUNY) colleges in the SUNY Learning Network. His research concluded that his hypothesis was supported, and that teaching presence is associated with students’ sense of a learning community. A study by Liu et al. (2007) confirmed that there are three levels of community within an online course: group, class, and beyond class. Liu et al. (2007) explained that learning communities in online courses develop when there is careful planning, continued support, and intentional tasks and activities.

Garrison et al. (2000) defined three key elements of an online community of inquiry: cognitive presence, social presence, and teaching presence. There is limited literature that focuses on cognitive presence compared to social presence and teaching presence (Dolan et al. 2017; Garrison, 2007). Dolan et al. (2017) further developed the research of Garrison et al. (2006) by providing two main categories of strategies to enhance cognitive presence, discussions and collaborative assignments, and also provide examples of utilizing cognitive presence in discussions by playing the devil's advocate, posing challenging questions, or posing relevant, authentic prompts. The collaborative assignments suggested by Dolan et al. (2017) to enhance cognitive presence include assignments utilizing problem-based learning, combined individual activities with small group learning, and peer reviews of assignments.

According to Rovai (2007), it is essential to have an active teacher from interconnected learning communities encourage students and act as a supporter and facilitator. Snyder (2009) offers an instructional-design theory that supports a sense of online community and includes goals, values, methods, and situations. Snyder (2009) explains that elements that support an online community structure are interactive, collaborative, and constructive.

Sheridan and Kelly (2010) utilized a cross-sectional survey to consider the importance of various indicators of instructor presence for students enrolled in online courses and what indicators of instructor presence students considered to be most important for their success in online courses. They found that students identified indicators of the instructor's presence being first, the instructor made the course requirements clear and, second, the instructor was responsive to the student's needs. They also found that students did not place a high value on synchronous or face-to-face communication (Sheridan and Kelly, 2010).

Sung and Mayer (2012) conducted a study to identify the factors that constitute learners' feelings of online social presence in an online higher education environment. They identified five facets of social presence in online distance education: The first facet identified was social respect, defined as online instructors and learners need to express respect for learners' efforts in teaching and learning activities and includes receiving timely responses. The second facet, social sharing, was explained as sharing information or expressing beliefs between the instructor and students to build relationships between them. The third facet is an open mind. It is described as an environment created by online instructors that is open and hospitable, where learners can provide feedback and constructive opinions. The fourth facet is called social identity, and it is explained that for this facet, the instructor and learners need to be aware of each other's identity as an instructor would in a face-to-face class discussion. The final facet was intimacy, where instructors and learners need to share their personal stories and experiences.

Research by Yuan and Kim (2014) provided guiding principles and suggestions to facilitate online learning communities' development. Their research offered online instructors specific methods to help develop online learning strategies. The guidelines were organized around:

(1) when to build a learning community, (2) who to be involved in the process of building a learning community, (3) where to build a learning community, (4) how to build a community, and (5) within each guideline, we explain why these considerations are important. (p. 223)

Dolan et al. (2017) provided a review of literature that explained that building community in online courses is vital to realizing student engagement in a variety of academic disciplines. Dolan et al. (2017) note three components that are essential to creating student engagement in online courses: teaching presence, social presence, and cognitive presence. Wehler (2018) offers five ways to build student-faculty and student-student relationships in an online course: make

yourself available, create a communication plan, encourage interaction, build “outside class” spaces that are free from content delivery, and bring the larger campus community into the course.

Higher education practices have shifted in the past decade from an instructor-directed teaching approach to student-centered learning, which has given rise to a learning community approach (Ouyang et al., 2020). Ouyang et al. (2020) considered to what extent and how instructors and students build a collaborative partnership in an online learning community course. The research was performed in graduate-level online courses utilizing a learning-community pedagogical strategy for the distance course and fostering learning and intended to build community through practices in the course. The findings of the study by Ouyang et al. (2020) found that a partnership between instructor and student can connect student learning with instructional guidance, balance the pull between active student learning and teacher authorities, and aid in a shift from instructor-directed to student-centered learning.

These studies examined the importance of developing community in online learning and how it impacts the students. The studies noted the importance of student and faculty interaction, faculty having a social presence with students, and creating an active collaborative learning environment for students. Online tutoring assists in fostering a collaborative learning environment where the student is able to actively engage in the course with a tutor and experience that social presence.

## **SUPPORT SERVICES FOR ONLINE LEARNERS**

Online tutoring is a support service for both online students and students who take traditional face-to-face courses who may not be able to attend tutoring on campus due to other commitments. It is essential to understand how online tutoring can be delivered to meet the needs



of students. Researchers identified different categories of supports for online learners, but they all emphasized providing services to make students active participants in their learning while continuously evaluating how best to serve the needs of students. All of these studies concluded that it is essential that online support services be delivered strategically to be effective. Shea (2005) identified the following characteristics of best practices for the design of online support services: student-centered, blended, personalized and customized, customizable, convenient, and just-in-time.

Researchers have considered many factors that impact online tutoring as a support for students. Turrentine and MacDonald (2006) concluded from their students that the success of online tutoring might not rely as much on the technology selected as on the development of an appropriate culture for online tutoring. A study of the use and value of student support services for online learners by Axelson (2007) found online technology support for students should be expanded. Moisey and Hughes (2008) describe the ideal online learning environment as one that seeks to develop the learner's independence and enable the learning process by providing supports that are flexible, accessible, and readily available when needed.

Support for online college students can be offered in many forms. Lee et al. (2011) investigated the relationship between students' perceived support and their learning outcomes in an online course at a large southeastern university and considered three categories of support: instructional, peer, and technical. The study revealed that perceived support was significantly related to the students' overall online course satisfaction. Lee et al. (2011) further explained that instructors must communicate the types of support available to students and provide an easy way of accessing and utilizing the support. Simmons's (2011) study reinforced the finding of Lee et al. (2011) and further explained that the communication between instructors and students of

available support interventions is critical for student success. Mechur Karp (2016) reinforced Lee et al. (2011) and added four nonacademic support mechanisms for supporting students: creating social relationships, clarifying aspirations, enhancing commitment, developing college know-how, and making college life feasible.

Crawford and Persaud (2013) explain that the lack of proper support for online students is correlated with decreased student success and increased withdrawals. Dean Heimberg (2014) looked at online student services from students' perspectives. A finding reported by Dean Heimberg (2014) was that online students wanted more real-time interaction with online services or interaction with their instructor. Pratt (2015) researched students' perceptions of current support levels and kinds of support for online learners and considered the degree to which support was provided effectively. A study done by Ellefson (2015) examined student perceptions regarding the nature and quality of the design and content, student and instructor interactions, teaching and learning, assessment and evaluation, technology, and student services of online education at community colleges in the United States. All of these studies concluded that it is essential that online support services be delivered strategically to be effective. Rodgers (2014) explains that strategic planning involves formulating goals, objectives, and action steps. For online support services to be strategically delivered, institutions must identify their goals and objectives and then monitor implementation and track progress (Rodgers 2014).

Lee et al. (2011) examined support for college students while Briggs et al. (2020) identified three categories of support for online students: academic and personal support, engagement support, and career-oriented support. Briggs et al. (2020) defines academics supports as areas such as advising, degree and course navigation, and subject matter tutoring; personal supports as helping students with areas such as financial issues, mental health services,

and connecting students to institutional and community resources such as childcare; engagement supports as those designed to increase connection between students and what they are learning, their peers, and the instructors; and career-oriented supports as those designed to help the student succeed in the workplace, including job placement supports and career-readiness assessments. Briggs et al. also noted it was important that both academic and personal supports be available online outside of business hours to serve learners who need services at different times.

With the recent dominating shift and rapid increase in online learning for higher education institutions, academic support for online learners has become progressively more important. Community colleges look for the best ways to support their online learners to ensure their success and completion. Dr. Morales (2019), president of Tarrant County College (TCC), a Texas community college that offers a virtual campus, TCC Connect, for online learners in two modalities, eLearning and Weekend College states, “Our commitment to providing online students 24/7 support has contributed to a robust 69% success rate for online students and 72% for Weekend College students” (p. 7). TCC Connect provides online students advising, tutoring, student organizations, workshops, and webinars to meet online students’ needs. Gregg and Shin (2021) explained that in a post-COVID environment, students will continue to participate in hybrid and online learning, and those modalities will see continued growth. Academic support centers must have easy-to-access peer support, remove barriers to student success, and normalize help-seeking among students (Gregg & Shin, 2021). Gregg and Shin (2021) state, “More importantly, we are meeting students where they are — online” (p. 76).

## **THE ROLE OF THE ONLINE TUTOR**

Tutoring has a long history in higher education. Tutoring was one of the primary forms of instruction in early European colleges, royalty, and the upper classes (Rheinheimer et al., 2010).

Since Harvard opened in 1630, tutoring has been utilized as an academic intervention strategy to support students (Dvorak, 2004). Research by Mohr (1991) on the evolution of academic tutoring shows that tutoring was used in one-room country schoolhouses when older students helped younger students learn to read. American academic institutions continue to utilize tutoring to support students by developing tutoring programs for specialized groups such as athletes, students with disabilities, and veterans. Tutoring continued to evolve in the 1970s at community colleges to support their open enrollment policies.

Pardo and Penalvo (2008) state that tutors need to possess certain competencies and skills that include:

1. Scientific competencies – Especially for academic tutors, it is indispensable to own knowledge enough to lead the whole process from solving doubts, proposing activities, and making the appropriate evaluations.
2. Technological skills – Tutor's office and classroom include a computer and software solutions connect to the Internet. Therefore, he must efficiently know the learning environment and tools at his disposal.
3. Methodological, didactical, and psycho-pedagogical skills (Marcelo et al., 2003). Online tutoring is a teaching role, and so his training must include many aspects related to knowledge and useful strategies to hold his job properly.
4. Communication skills – Assuming that any teaching work is a communication act, and particularly eLearning, because of the writing format of communication inherent to this learning form, communication is one of the most important skills that an excellent tutor must own.
5. Social skills and leadership – eLearning methodology is based upon creating a community. In this context, the tutor must be able to involve students and lead the group towards achievement of learning purposes.
6. Evaluation skills – One of the most important functions for tutors is to evaluate, not only competencies achieved from students, but all the elements related to the learning activity: learning objectives, strategies, activities, etc.
7. Quality skills – As an effect of the last skills, the online tutor is probably the better-quality auditor of eLearning process. Although if an external quality audit should ever be necessary, the best way to ensure a permanent quality level is to train tutors to evaluate quality on the eLearning process.

Arendale (2007) defines tutoring as “one-to-one, or small group facilitated learning assistance that explains, clarifies, and exemplifies a topic and ultimately promotes independent learning” (p. 30). Pardo and Penalvo (2008) define an online tutor as

the teaching staff that follows a group of students on their learning path, ensures the efficiency of teaching-to learning process, promotes the achievement of aims and skills predicted for the academic initiative that he leads, by creating a context of collaborative and active learning, and evaluates how pre-established aims were achieved for students and for the academic intervention. (p. 11)

Pardo and Penalvo (2008) state that there are three roles fulfilled by tutors in eLearning activities: academic, psycho-pedagogical, and personal.

There are several types of tutors who assist students in higher education institutions including peer tutors, supplemental instructors, embedded tutors, and tutors who assist students out of academic support centers. These tutors may or may not be available as online tutors. Ryan et al. (2000) explain that the role of the online tutor is to serve as an educational facilitator, and a tutor must possess skills to assist students. Those skills include nurturing online collaboration, creating an atmosphere of openness, valuing the participants’ contributions, and creating a welcoming atmosphere that builds a rapport with students. The online tutor may be the only direct contact a student has in their online student experience. Rheinheimer et al. (2010) explains that academic support programs target at-risk students who are likely to drop out of school because they lack adequate college preparation.

In an early study, Berge (1995) provided four areas necessary for online instruction: pedagogical, social, managerial, and technical. Denis et al. (2004) continued the work of Berge (1995) but focused their approach on the tutor’s interaction with students. Denis et al. (2004) identified seven central roles and peripheral roles of the e-tutor’s interaction with students. Denis

et al. (2004) also identified four peripheral roles of the e-tutor including manager/administrator, designer, co-learner, and researcher.

By 2012, research began to focus on the changes in tutoring based on modality; for example, a study conducted by Kopp et al. (2012) looked at whether experienced e-tutors differ from inexperienced e-tutors in how they support online collaboration. The study found that more experienced tutors intervened more often to foster desired activities and outcomes.

After the COVID-19 pandemic, Manasse and Rostworowski (2022) looked at how their online tutoring services and tutor training met the needs of online students and what gaps remained in serving online students. The findings of the study were coded into three themes: knowledge about tutoring services, the affective domain — how students feel about tutoring, and respondent demographics. The study's data revealed that the vast majority (95.2%) of the study participants were aware of the institution's free online and in-person services. The study found that the tutoring modality had an even divide in preference: 46.7% preferred online tutoring, 43.3% in-person tutoring, and 9.1% had no preference for the tutoring modality. The researchers noted that they were surprised that students were more satisfied with their online tutoring spaces than the in-person spaces for tutoring. They noted in their research that they continued to see an increase in the success rates of students who utilize tutoring services during COVID-19 as they did pre-COVID (Almassy & Jun, 2020).

While several types of tutors assist students in higher education institutions — peer tutors, supplemental instructors, embedded tutors, and tutors who assist students out of academic support centers — not all of these types of tutors may be available as online tutors. An online tutor, too, may be described with totally different terms, such as online moderator, e-moderator, distance education tutor, and e-tutor (McPherson & Nunes, 2004).

## **PEER TUTORS**

Peer tutors are one type of tutor that have been successfully utilized in the online tutoring environment. Peer tutoring is defined as students who study or learn in pairs to help each other learn (Ali et al., 2015). Peer tutoring has been applied to students of various age groups who help students learn from each other. Higher education institutions have often used peer tutoring to fill demand when resources are insufficient and demand is high (Ali et al., 2015). Students receive many benefits from peer tutoring, including developing communication and interpersonal skills, enhancing confidence, and becoming self-motivated (Ali et al., 2015).

A study by Colver and Fry (2016) examined the effect of peer tutoring on students' course grades when students were repeating an undergraduate course. Colver and Fry (2016) report that peer tutoring does have a causal impact on improving students' grades from a first attempt of a course to a second repeated attempt. Another finding of the study was that first-generation students who received peer tutoring during their second attempt had the highest grades compared to the first-generation students who did not receive tutoring and continuing generation students who received or received no tutoring. Abbot et al. (2018) conducted a case study at Trinity University to understand the experiences of peer tutors in Trinity's First-Year Experience. The research of Abbot et al. (2018) found that when tutors, students, and professors have clarity in the role tutors have in and out of the classroom, the tutors are better able to support students, enjoy the tutoring experience, and feel connected to their work and the instructor. Research by Arco-Tirado et al. (2020) examined the impact of a peer-tutoring program on academic performance among first-year students. It confirmed that peer-tutoring is an effective and sustainable solution, particularly for first-year college students. Kim et al.

(2021) found that a peer-tutoring online discussion model increased student engagement in online courses among students with diverse college majors and sociocultural backgrounds.

### **SUPPLEMENTAL INSTRUCTORS**

Supplemental instruction (SI) was developed by Deanna Martin in 1973 at University of Missouri-Kansas City (UMKC) (Phelps & Evans 2006). Martin focused the efforts of the program on high-risk courses. The SI program offers course support for specific courses where tutors are embedded in a course and work closely with faculty to support students (Beach & Howerton, 2018). The SI program has specific training curriculum and program parameters for schools. The student tutor is called and SI leader. The SI leaders have demonstrated a strong foundation in the course by earning an A or a B, demonstrate good interpersonal communication skills, and show a willingness to assist fellow students in learning course material. SI leaders are facilitators, not instructors. Aschenbach (2022) explains that SI supports students' academic success by integrating "what to learn" with "how to learn." Hurley et al. (2006) stated that SI sessions should be proactive and participatory opposed to reactive and passive. For SI leaders to be successful, they must be well trained. Zartisky and Toce (2006) explained the seven objectives of SI training at LaGuardia Community College in New York: (1) introduce how the SI program works, (2) explain the how the SI program is different from other academic support programs, (3) present the basic theories of learning, (4) demonstrate strategies that are incorporated into cooperative and collaborative learning, (5) go over several study skills, (6) discuss tactics to handle behavioral issues, and (7) view and evaluate videotape of typical SI sessions.



## **EMBEDDED TUTORS**

Embedded tutors are tutors who are tied to a particular course. There are many ways that embedded tutors are utilized in courses. Beach and Howerton (2018) explain that many colleges have adopted comprehensive tutoring programs that embedded tutors similar to SI but were created without the knowledge of the UMKC model and training. The research of Beach and Howerton (2018) state that schools that use embedded tutors often have them work with faculty to support students in a class section. Tutors receive training to help students develop their learning skills and explore their own existing learning strategies. Tutor training sessions may explore stress management, test-taking, deep-breathing techniques, and other personal and mental-health support (Beach and Howerton, 2018). The roles of the embedded tutor can vary depending on the institution's program. Aschenbach (2022) describes embedded tutoring as having a tutor present during class time with the faculty member where the tutor can help students one-on-one or in group activities. Embedded tutors may support online courses and introduce themselves through course videos and explain how to contact them if support is needed by the student.

## **FACULTY AND TUTOR PRESENCE IN ONLINE COURSES**

Online tutoring creates a personal presence in online courses. An online tutor is someone students can converse with, adding a dimension to the online course. Denis et al. (2004) state that a tutor is “someone who interacts directly with learners to support their learning process when they are separated from the tutor in time and place for some or all these direct interactions” (Definitions, Roles, and Competencies section, para. 1) The tutor works in direct partnership with the instructor, so it is important to understand the role of the instructor in online courses. Five specific roles were identified by Heuer and King (2004) that online instructors could utilize

to create a sense of instructor presence in their courses: planner, modeling, coaching, facilitator, and communicator. Instructor presence in online discussion forums with optimal frequency and the amount of instructor interaction has been researched. Social agency theory is explained by Louwse et al. (2005) as “the social cues like the face and voice of the agent motivate this interpretation” (p. 693). Manderlach et al. (2006) studied the faculty perceptions of instructor participation in online discussions. The study’s feedback revealed little agreement among the 96 experienced online instructors on the quality and frequency of online instructor interaction that should be monitored and evaluated.

Brinkerhoff and Koroghlanian’s (2007) study of 249 college students from 13 institutions in the United States noted that emailed communication with the instructor was rated very important or important. A study by Sheridan and Kelly (2010) considered the different teaching presence indicators valued by students taking undergraduate and graduate courses. The studies of Sheridan and Kelly (2010) and Bowers and Kunnar (2015) had similar findings that valued behaviors of instructor presence and were related to making the course requirements clear and providing timely feedback to students. Bowers and Kumar (2015) examined the students’ perceptions of teaching and social presence in two learning environments: traditional face-to-face and fully online courses. The study results found that students’ perceptions of teaching and social presence were significantly stronger in the fully online course than the face-to-face course.

Instructor presence is defined by Richardson et al. (2016) as the “specific actions and behaviors taken by the instructor that projects him/herself as a real person” (p. 259). Richardson (2016) examined instructors’ perceptions related to presence, beliefs about actions, and the perceived impact of instructional presence. The results of Richardson’s (2016) study found that

instructors viewed instructor presence as a critical component in online courses, but their reasons varied.

Cho and Cho (2016) performed a study to develop a valid and reliable scale to measure online instructors' use of scaffolding strategies to promote interactions among students or between students and instructors. Martin et al. (2018) expanded on the work of Cho and Cho (2016) and considered student perception of facilitation strategies, which included the following four constructs: instructor presences, instructor connection, engagement, and learning.

A study by Hoey (2017) evaluated instructor posts in graduate-level courses to determine their impact on students' perceptions of the quality of the instructor and course, students' perceptions of their learning, and students' actual achievement. Hoey's (2017) research found that the type of instructor discussion interaction, not the quantity, improves the students' insight of the quality of their instructor, the quality of their course, their perception of learning, and their actual achievement.

Wilson et al. (2018) explored whether adding videos of an instructor to online lecturers might improve attentional engagement, learning, and subjective evaluations. The study results found no advantage for video lecturers with visuals of the instructors. The learners reported that they found the online lectures with visuals of the instructors more enjoyable and interesting; however, the study revealed that the instructors' visuals might distract students.

A study by Pi et al. (2020) tested the effects of the instructor's eye gaze and body orientation on learners' attention allocation and learning performance. Pi et al. (2020) identified that an instructor's eye gaze held the learners' interest longer than when a student watched a video lecture. Martin et al. (2020) examined which facilitation strategies instructors perceive to be most and least helpful in establishing instructor presence, instructor connection, engagement,

and learning in online courses. They found that the top two facilitation strategies that instructors perceive as most helpful in establishing instructor presence were timely instructor response to question via forums and email and instructors' timely feedback on assignments/ projects within seven days. Table 1 summarizes attributes for presence in online classes.

Table 1: Attributes for Presences in Online Classes

RESEARCHERS	ATTRIBUTES FOR PRESENCE IN ONLINE CLASSES
Heuer and King (2004)	Roles Identified to create instructor presence: planner, modeling, coaching, facilitator, and communicator
Louwerse, Graesser & Mitchell (2005)	Social agency theory - social cues such as the face and voice
Mandermach, Gonzales, Garrett (2006)	The quality and frequency of online instructor interaction should be monitored and evaluated
Brinkerhoff & Koroghlanian (2007)	Email communication with the instructor rated very important and important
Sheridan & Kelly (2010)	Various teaching presence indicators valued by undergraduate and graduate students
Bowers & Kunnar (2015)	Behaviors of instructor presence were related to making the course requirements clear and providing timely feedback to students
Richardson et al. (2015)	Instructors present themselves as a real person is a critical component
Cho & Cho (2016)	Scaffolding strategies to promote interaction among students or between students and instructors
Martin, Wang & Sandaf (2018)	Student perception of facilitation strategies including instruction presence
Hoey (2017)	The type of instructor discussion interaction, not the quantity, improves the students' insight of the quality of their instructor, the quality of their course, their perception of learning, and their actual achievement
Wilson et al (2018)	Video lecturers with visuals of the instructors provided no advantage and that visuals of the instructor's might be distracting
Pi et al. (2020)	Identified that and instructor's eye gaze held the learners' interest longer than when a student watched a video lecture.

RESEARCHERS	ATTRIBUTES FOR PRESENCE IN ONLINE CLASSES
Martin, Wang & Sandaf (2020)	The two top facilitation strategies that instructors perceive as most helpful in establishing instructor presence were timely instructor response to questions via forums and email and instructors' timely feedback on assignments/projects within seven days.

## **PEDAGOGICAL PRACTICES**

### **Synchronous Online Learning**

Both synchronous and asynchronous communication forms are utilized in online courses. Synchronous sessions in an online course are when participants gather in an online course management system in real time and complete activities in sync with one another. Online tutoring occurs synchronously with the student and the tutor. In an early study by Koeber and Wright (2008), a quasi-experiment was conducted in which conferencing video technology was used to teach a large section of introductory sociology students to understand this online technology's effectiveness. The researchers found that video conferencing is a viable technology used by instructors to teach and interact with students effectively.

A study by Mc Brien et al. (2009) using the software platform Elluminate Live! (now Blackboard Collaborate) investigated the ways in which a synchronous learning environment affects students' learning experience, and three findings were presented. First, when too many simultaneous interactions were used such as audio, typed chat, and whiteboard, this caused confusion for students. Second, the lack of nonverbal communication reduced their educational experience (at the time of the study, the students and instructors did not have webcams installed). Third, technology issues, such as broken links or faulty headphones, hinder synchronous online classes.

Several researchers have found that students view synchronous interactions positively because of the instant feedback, because they are able to see their classmates, and because they feel more engaged in the course (Falloon, 2011; Hrastinski, 2008a; Stein et al., 2009). Martin et al. (2012) studied the importance of interaction within a synchronous virtual classroom. Their study utilized four types of interactions to review their findings. These categories included learner-instruction interaction, learner-learner-interaction, learner-interface interaction, and learner-content interaction. The researchers also found that students agreed that the virtual classroom aided in all four of the different interaction categories. Another finding was that student interaction and learning were aided by the live communication that occurred through the virtual classroom.

Martin and Parker (2014) administered a research survey to identify why instructors adopt synchronous virtual classrooms and how they use them after their adoption. Finding the balance between synchronous and asynchronous tools and methodology has been a challenge for educators. Martin and Parker (2014) shared various ways faculty can use synchronous virtual classrooms for activities such as discussing and debating the concepts presented in asynchronous course work, conducting online office hours and online lab, bringing in consultants and guest speakers from different locations, archiving virtual sessions for future viewing by students and enhancing interaction and building a sense of community by using online breakout rooms. Using qualitative research with multiple methods for collecting course and student data, Yamagata-Lynch (2014) found that a synchronous delivery mode can provide a stronger sense of connection among course participants.

A study by Olson and McCracken (2015) explored student achievement and a sense of community in response to incorporating synchronous lectures into an online course. This study

reported no significant differences between the fully asynchronous class or the class that was both asynchronous and synchronous. Other researchers have also investigated which synchronous technology is more beneficial than asynchronous methodologies (Giesbers et al., 2014, Rockinson-Szapkiw & Wendt, 2015).

Politis and Politis (2016) performed a study utilizing Blackboard Collaborate as the synchronous online environment and found that the students found easy access to Blackboard Collaborate and that an effectively designed structure enhanced learners' problem understanding and communication. The structure included lessons that were well prepared; content that was introduced progressively each week; a commitment to collaboration through announcements, course messages, and online presentations and quizzes that were designed for each synchronous session; and the Blackboard content presentation remained consistent throughout the data collection period. Politis and Politis (2016) also noted the online learners' readiness with educational communication technologies positively influenced their knowledge acquisition.

Peterson et al.'s (2018) work explains that synchrony positively affects students' perceptions of belonging, positive affect, and cognitive processes. Craven (2020) noted that synchronous online sessions can offer many beneficial features, such as an increase in overall connection to the course, engagement, and student retention. Technological advancements have made it possible for students and instructors to interact in a synchronous timeframe. The researcher also offers advice for those teaching synchronous sessions such as being personal as appropriate and even a bit informal, schedule synchronous office hours, and respect students' privacy by not mandating webcams. Synchronous collaboration tools are commonly used as virtual classrooms where students and faculty can participate in real-time exchange and learning. Examples of synchronous web-based tools are Blackboard Collaborate, Google Hangouts, Adobe

Connect, Zoom, and WebEx. The researcher also adds that a synchronous online learning environment offers many beneficial features that engage a student in the learning, increase connection to the course, and increase student retention. Advantages that are noted by the researcher regarding the synchronous sessions are that synchronous sessions aid in student assessment and learning, direct dialogue leads to positive rapport, and it provides a structure that normalizes the experience.

### **Asynchronous Online Learning**

Online courses today evolved from early correspondence learning, which was primarily independent and asynchronous in structure. Asynchronous educational environments have benefits because they provide students flexibility; asynchronous communication occurs in delayed time and does not rely on simultaneous access for educational outcomes in online courses (Johnson, 2006). Researchers have noted that creating community in asynchronous online course format is critical to reduce the feelings of isolation, to improve academic success, and increase learning satisfaction (Rovai, 2002; Slagter van Tyron & Bishop, 2009). Discussion boards have been the primary tool for students to create community and promote higher level cognitive thinking (Mazzolini & Maddison, 2007).

Oztok, Zingaro, Brett, and Hewitt (2013) found that utilizing a private messaging function in the asynchronous environment can have a positive effect. Waters (2012) stated that upon examination of asynchronous discussions, students who emerged as leaders in the course posted more frequently and visited the discussions more often than their peers who were not viewed as leaders in the course. However, a study by Clifford (2018) examined reasons students participating in asynchronous online courses perceive faculty as disinterested, the significance of this perception, and how students respond to disinterested faculty. Later, Craven (2020) indicated



that asynchronous course settings can be valuable because they foster an environment of discipline, autonomy, and strong time management. Persada et al. (2022) noted some weaknesses of asynchronous learning, including the lack of visual cues and the delay in communication, which can prevent a delay in the opportunity for comments and questions.

### **Asynchronous Versus Synchronous Learning**

Many researchers have highlighted the benefits and challenges of asynchronous versus synchronous learning, including time-independent access, opportunities for heightened peer interaction levels, circumvention of classroom behavior, and support for various learning styles (Morse, 2002). It has been explained by researchers Hrastinski (2008b) and Stein et al. (2009) that asynchronous interactions permit a student to consider their thoughts, engage with the content more deeply, feel part of the learning community, and post more reflective comments in discussion boards. The research concludes that there are situations in online learning where it is valuable to offer both asynchronous and synchronous activities.

A study by Asterhand and Schwarz (2010) looked at online synchronous group discussions and effective moderation that depended on a communication tool that enables participants to communicate through text and diagrams. Giesbers et al.'s (2014) study examined the relationship between the use of synchronous and asynchronous communication over time and how this impacted student motivation. The researchers also considered combining asynchronous and synchronous communication to influence student learning effectively. The results of Geisbers et al.'s (2014) study showed that engagement in synchronous communication positively affected engagement in asynchronous communication for participants who took part in video conferences posting more assignment-related messages in all periods than the participants who did not participate, both for autonomy and control-oriented students.

Yamagata-Lynch (2014) considered how the designer/instructor could optimize learning experiences from students studying in online learning environments in a blended online course that relies on both synchronous and asynchronous technologies. According to this study synchronous delivery modes can provide a strong sense of connection among online participants, and a blended online and asynchronous course can strengthen social presence. In a comparative study, Moallem (2015) studied three methods of communication, synchronous web-conferencing, asynchronous, and a combined method of synchronous and asynchronous, to consider how they influence learner motivation and self-regulation, social presences, satisfaction, and learning process and outcomes in short, interactive, and collaborative online courses. Moallem's study revealed that factors other than the communication methods might be responsible for self-regulation. The study determined there was a relationship between student satisfaction and perception of social presence and the three methods of communication explored in the study. The study concluded that communications methods that provided the highest social presence level were the synchronous and combination of asynchronous and synchronous communication methods.

## **CHAPTER CONCLUSION**

The research detailed in this chapter examines three key components of the online environment, the interaction in the online environment, and the forms of communication in an online environment. Research indicates that community college students have historically struggled in online courses. The COVID-19 pandemic has drastically impacted online courses and their delivery within higher education. The pandemic has caused financial and technological hurdles for online college learners who are seeking to complete courses. Online students need to be provided the wrap-around support services that traditional face-to-face students receive

utilizing the best practices. The studies indicate that support services for online students that are flexible and accessible are critical for student success.

Higher education institutions can learn from the impacts of COVID-19 how they need to adapt to meet the needs of online students. Online tutoring is a support service that is provided to help students better understand course concepts, enhance student engagement, and lead to greater course and student success. Students, instructors, and tutors play a vital role in creating a positive learning environment in online courses. Engagement of students in both synchronous and asynchronous forms positively impacts the online learner's experience and creates a strong sense of connection.

## CHAPTER THREE: METHODOLOGY

### INTRODUCTION

Student retention is an increasingly important issue for community colleges across the country. Many students arrive at community colleges academically underprepared and need assistance (Center for Community College Student Engagement, 2016). Community college students who take online courses are often the least prepared (Bawa, 2016; Bound, Lovenheim, & Turner 2012; Clark-Ibanez, 2008). It is critical to understand the impact of COVID-19 on community colleges because almost half of all students attending public institutions attend community colleges, and community colleges enroll more than half of the students of color (Bulman & Fairlie, 2022). There are many reasons community college students struggle with online learning including a lack of structure, requirement of more self-discipline, and technological disruptions (Bulman & Fairlie, 2022). One method utilized to improve academic achievement and retention for online courses is online tutoring. The purpose of this research is to understand what best practices in online tutoring community colleges have been utilized that positively impact student success.

This chapter describes the research methodology and design for this qualitative multisite case study. It will delineate the research methods necessary to understand themes and recommendations for best practices for online distance education tutoring within the American community college. A qualitative multisite case study approach was utilized with purposeful sampling to gain insight and understanding from community colleges that utilize online tutoring

to improve student success. Purposeful sampling is utilized when the researcher is seeking information-rich cases and has the objective of gaining insight and understanding of the topic under investigation (Bloomberg & Volpe, 2016). The strategy of purposeful sampling is described by Bloomberg and Volpe (2016) as “a strategy for accessing appropriate data for the purpose of the study, the resources available, the questions being asked, and the constraints and challenges being faced” (p. 148). This chapter defines and provides justification for this study’s qualitative paradigm, the sampling method and participant selection, data collection protocol, data analysis procedures, and the methods used to ensure trustworthiness, validity, reliability, and quality, and the researcher’s role.

## **STATEMENT OF PURPOSE**

The purpose of this study is to identify best practices in online tutoring that have positively impacted student success. The research aims to describe and analyze best community college practices using online tutoring support. Driven by a 2020 consultant report on distance education and its findings on multiple aspects of online education (Brown et al., 2020), Harper College is looking to expand tutoring for online students. The offerings for online tutoring at Harper College are very limited in the range of subjects/courses that offer tutoring, the times of day that tutoring is offered, and the duration of tutoring.

## **Research Questions**

This study utilized research questions to understand what practices have been successful in implementing and maintaining an online tutoring program. The three key areas of online tutoring as identified in the research that were examined are the application of technology, the role of tutors, and the impact of tutoring on students.

The research questions are:

1. What best practices can community colleges use to improve learning and success for online courses using online academic tutoring?
2. How are in-house tools and supports used to improve learning and success?
3. How are synchronous tools and supports used to improve student learning and success?
4. How are commercially available tutoring tools and supports used to improve student learning and success?

## **RESEARCH DESIGN AND RATIONALE**

### **Value of Qualitative Research**

The paradigm model selected for the research is qualitative for three reasons. First, there is a lack of qualitative studies that have been done on community college online tutoring programs. Quantitative research demonstrates how often something may occur, whereas qualitative research seeks to answer the “what” question (Black, 1994). This study aims to understand what innovative practices community colleges are using to support distance learners in the form of online tutoring support. Pope and Mays (1995) explain that the objective of qualitative research is to help us understand social phenomena in natural settings, as opposed to an experimental setting, to understand the participants’ experiences and views. This research seeks to understand the practices community colleges have put in place to support online learners through online tutoring. Understanding the perspective of various community colleges will help determine best practices for online tutoring programs at community colleges.

The second reason to select a qualitative study as the model method is that the study will give a voice to what is being done to support community college students through online tutoring. There is limited information available on what is being done at community colleges in online tutoring. Sofaer (1999) explains that qualitative research allows the people who play

different roles in a community to provide clarification on what they are doing to support students. Representatives from institutions that offer online tutoring provide insight and uncover their thoughts on what makes their online tutoring programs successful. Student programs that are implemented are often improved upon by listening and understanding the best practices of institutions that implemented similar programs.

The final reason to utilize a qualitative study is that qualitative methods may provide insight on how and why the same events are often interpreted by different stakeholders (Sofaer, 1999). Students come from diverse backgrounds, experiences, and preparedness levels and to support those students may require varying practices. To improve a program and understand what may work best it is beneficial to hear from multiple voices. Qualitative research provides that opportunity for that feedback.

Merriam (2009) provides four perspectives of qualitative research: positivist/postpositivist, interpretive/constructivist, critical, and postmodern/poststructural. The approach to this research was interpretive/constructivist. Interpretive research is defined by Merriam (2009) as research that assumes that reality is socially constructed and that there are many possible interpretations of a single event. Students arrive at community colleges with different backgrounds and experiences. The goal of this research is to understand how community colleges can best support the diverse needs of community college students through online tutoring.

### **The Qualitative Case Study**

The approach to be used for the qualitative research is a case study. Baxter and Jack (2008) define a qualitative case study approach as an approach that facilitates exploration of a phenomenon utilizing a variety of data sources. Anderson et al. (1998) describe a case study as

“a holistic research method that uses multiple sources of evidence to analyze or evaluate a specific phenomenon or instance” (p. 161). A case study permits the researcher to understand what community colleges offer to provide high-quality tutoring support for online students. Yin (2014) provides three categories of case study research: exploratory, descriptive, and explanatory. For this research, an exploratory multicase study was performed. An exploratory case study sets out to examine a phenomenon that is of interest to the researcher (Zainal, 2007). Merriam (1998) notes that the single most defining characteristic of a case study is that the object of the case study is limited and has boundaries. Merriam (1998) provides examples of a case that could include a class, a school, or community.

A multisite case study methodology was selected because it enables the researcher to gain a holistic view of a phenomenon and can provide a comprehensive picture since multiple sources are utilized (Noor, 2008). Zainal (2007) explains that case study information can capture complexities of life that are not able to be captured through experimental or survey research. Another reason that the case study methodology is being used is that Merriam (1998) reports that case studies have proven useful for studying educational innovations and have been able to assist in informing educational policies. A case study can provide the researcher insight that can be utilized to structure future research to advance the knowledge base in the field (Merriam, 1998). Research specifically on community college online tutoring programs can provide insight that can improve the success rate of students. A case study can provide a comprehensive investigation of how to improve the student experience when offering online tutoring.

#### **SAMPLING METHOD AND SELECTION OF STUDY SITES**

To determine the appropriate sample size, I used purposeful sampling. Purposeful sampling is defined by Merriam (2009) as sampling based on the assumption that the researcher



wants to discover, understand, and gain insight and, consequently, choose a sample from which the most can be learned. Patton (1990) explains that qualitative examination typically focuses on in-depth, relatively small samples, even single cases. The participants included institution representatives from community colleges across the country who are current professional employees (i.e., academic support managers) with direct knowledge of tutoring support for online students offered at their institutions.

Sandelowski (1995) suggests three kinds of purposeful sampling: maximum variation, phenomenal variation, and theoretical variation. I decided to use maximum variation, which Sandelowski (1995) states is the most frequently used kind of sampling. The researcher must determine what type of variation they want in their sample and what kinds of variation they want to maximize (Sandelowski, 1995). Eitkan et al. (2016) describe maximum variation sampling as “to look at a subject from all available angles, thereby achieving a greater understanding” (p. 3). I sought to understand best practices used at community colleges, so it was beneficial for to look at community colleges with a variety of sizes and demographics. Given that the sample of community colleges is diverse in size, this sample may limit replication of some of the findings; however, utilizing maximum variation provides the researcher with diverse perspectives from various community college institutions.

I considered the two criteria that Yin (2014) offers for selecting potential sites. Yin (2014) explains that sites where similar results are predicted may be used as “literal” replication. Secondly, Yin (2014) states that sites may be selected for “theoretical” replication. The community colleges selected for this study would be literal replications since the sites chosen are designed to corroborate the findings at the other community colleges in the study.

According to Benbasat et al. (1987), a researcher must make two considerations when selecting a site. First, researchers should consider the nature of their topic (Benbasat et al., 1987). The topic of the research is to identify best practices used at community colleges that have implemented online tutoring. Through reading and research, I identified schools that are actively improving their online tutoring. The second consideration for a researcher was that site selection should be based on the characteristics of the institution (Benbasat et al., 1987). This study investigated online tutoring programs at community colleges, and the schools that participated in the study were limited to community colleges who offer online tutoring.

Research by Onwuegbuzie and Collins (2007) recommends that sample sizes be informed principally by the research objective, research question(s), and the research design. The selection of the sample size is crucial because it determines the extent to which the researcher can make statistical and/or analytic generalizations (Onwuegbuzie & Collins, 2007). Sandelowski (1995) explains that sample sizes in qualitative research should not be so small that it is difficult to achieve data saturation and not be so large that rich data can be extracted. Creswell (2002) suggested that the minimum sample size for a case study is three to five participants. Based on the research findings, I designed the study to include a sample size of eight participating community colleges. This sample size was manageable for the research to extract meaningful data. Eight community colleges in the case study provided multiple perspectives so that I could collect a wide range of data to understand the phenomenon.

The selection of participants was purposeful to provide insight on the topic. Morse (2002) states: "A good informant is one who has the knowledge and experience the researcher requires, can reflect, is articulate, has time to be interviewed and is willing to participate in the study" (as cited by Denzin & Lincoln, 1994, p. 228).

To begin purposive sampling, Merriam (2009) states that the researcher must determine the selection criteria critical to choosing the people or sites to be studied. The researcher must create a list of essential attributes to the study and then find or locate units that match the list (Merriam, 2009). For this study of online tutoring programs at community colleges, I determined that three criteria must be met for the community colleges to be part of the sample. The first criterion was that the community college must have an active online tutoring program. The second criterion was that the college actively promotes online tutoring to their distance learners. The third criterion was that the community college has maintained an active online tutoring program for over one year.

### **Institution Selection Criteria**

The experiences of community colleges that currently offer robust online tutoring are complex and provide valuable information that can be used to enhance and improve the online tutoring program at Harper College and at other community colleges. I initially selected eight community colleges for the study using purposeful sampling. Trochim et al. (2016) explain that purposeful sampling is used when you have a purpose related to the type of participant you are seeking, and you also may be seeking one or more specific types of groups of people. I sought institutions that had varied tutoring platforms and populations. When selecting sites to gain a comprehensive picture of what was being utilized at community colleges, three key factors were considered: (1) notation in the available research on online tutoring, (2) utilization and application of applicable software, and (3) the size of the institution. All the community colleges included in the study have robust online tutoring programs.

First, three of the institutions were included because they were identified in the research as utilizing online tutoring. Second, I considered the technology that was utilized by all the

community colleges to get a sample size that included various tutoring system platforms. The other institutions use various platforms for online tutoring including Tutor.com, Upswing, NetTutor, Cranium Café, Microsoft Bookings, Zoom, Discord, YouTube Live, Who’s Next and Google Meets. I also wanted to include neighboring institutions to understand what they were using for online platforms.

Finally, I wanted to include institutions with varied size, college setting and geographic location to gain a holistic view of program offerings (Table 2).

Table 2: Case Study Sites

INSTITUTION	STATE	COLLEGE SETTING	STUDENT POPULATION
Institution 1	Pennsylvania	Suburban	9,827
Institution 2	Illinois	Suburban	21,010
Institution 3	California	Suburban	16,757
Institution 4	Texas	Urban	39,896
Institution 5	Illinois	Suburban	7,882
Institution 6	Kentucky	Rural	3,104
Institution 7	New York	Suburban	4,735
Institution 8	Arizona	Suburban	8,768

## **INSTRUMENTATION AND DATA COLLECTION**

Merriam (2002) stated the data collection strategy should be determined by the questions of the study and what will provide the best information to answer the question. In case study research, multiple data collection methods are typically used (Benbasat et al., 1987). A variety of data collection methods were employed to obtain relevant information to provide insight into the research purpose. Data collection for this study included semistructured interviews, documents,

and field notes. Yin (2014) explains, “The most important advantage presented by using multiple sources of evidence is the development of converging lines of inquiry” (p. 120).

Patton (1990) provides three types of qualitative interviews: informal interviews, semistructured interviews, and standardized interviews. Yin (2014) explains that the interview is one of the most important sources of information for case study information. For this study, a semistructured interview format was selected. A semistructured interview is described by Hoepfl (1997) as an interview where the interviewer can inquire and explore within a predetermined area of interest. The semistructured interview was chosen because it allows adequate flexibility to approach unique respondents differently and still cover the same areas of data collection (Noor, 2008). Video interviews were recorded and took approximately 45-60 minutes. Participants from community colleges were sent the questions prior to the interview.

An interview guide was used that has a list of topics that the interviewer wanted to explore. The interview guide helped initiate and direct each interview. Lofland and Lofland (1984) explain that interview guides can be revised over time to focus on particular areas of importance or eliminate topics that do not help meet the research goals. The interview guide included three main topics related to online tutoring: the application of technology, tutors, and students. These topics were utilized to understand the practices used on their campuses to contribute to students’ success at their community colleges.

Documents were also collected that were pertinent to the research to provide another way to understand students’ experiences in online tutoring programs. Yin (2014) offered six data sources that contribute to relevant case study research: documentation, archival records, interviews, direct observations, participant observations, and physical artifacts. Documents assist in explaining what has happened and help in bringing together data. This study’s documents

included some of the archival records regarding online tutoring programs at participating community colleges. Other documentation also included promotional material given to students and training materials for tutors from colleges regarding their online tutoring program.

Field notes are described by Creswell (2007) as comprising of both descriptive and reflective. Throughout the data-collection process, detailed field notes were maintained. Merriam (2009) describes field notes as follows:

Field notes should be highly descriptive. What is described are the participants, the setting, the activities, or behaviors of the participants, and what the observer does. By highly descriptive I mean that enough detail should be given that readers feel as if they are there, seeing what the observer sees. (p. 130)

Thus, for this study, field notes were collected after each of the interviews with instructors and/or staff from participating colleges. The field notes included insights and thoughts on the interviews.

Yin (2014) states that data collection must be guided by some sort of protocols. For this study, protocols were established to ensure consistency and to maintain the integrity of the study. Before beginning the face-to-face interviews with the participants, I piloted the interview questions with Harper College academic support staff and others familiar with online tutoring offerings. The purpose of the pilot was to practice my interviewing skills and to examine the wording and clarity of the interview questions.

The following is the contact protocol for participants who were interviewed:

1. I compiled a list of community colleges that have been noted in research or have been referred via professional contacts, and that are utilizing online tutoring. Institutional representatives, the interviewees, were all current employees with direct knowledge of the tutoring support for online students offered at their institution.
2. Representatives of community colleges identified who are utilizing online tutoring at their institution (i.e., instructional support director, online learning manager) were contacted via phone or e-mail with a description of the purpose of the study, asking if they would be willing to be interviewed.

3. If the representative of the community college, agreed to participate, a copy of the informed consent form was sent via e-mail. Included in the email were the study's expectations, a request for interview scheduling dates/time, and consent to digitally record the interviews.
4. Interview times were established that were convenient for the participants. A confirmed date, time, and location was sent to the participant for the interview.
5. Prior to the interview, a copy of the interview questions was e-mailed to the participant with a follow-up confirmation of the date, time, and location of the interview.

## **DATA ANALYSIS**

For this qualitative study, the data analysis methods that were utilized are the four forms of data analysis presented by Stake (1995): categorical aggregation, direct interpretation, patterns, and naturalistic generalizations. These forms were intertwined with the data analysis framework provided by Creswell (2007), which includes the following four stages: data-managing; reading and memoing; describing, classifying, and interpreting; and representing and visualizing. It is critical to the study that data be collected in a systematic and logical manner so that meaningful themes emerge that provide rich information identifying best practices utilized by best practices to support online learners in the form of online tutoring.

In qualitative research, the researcher collects large volumes of data and seeks to find patterns and themes in the data collected. Ritchie and Spencer (2002) state, "Qualitative data analysis is essentially about detection, and the tasks of defining, categorizing, theorizing, explaining, exploring and mapping are fundamental to the analyst's role" (p. 309). According to Merriam (1998), data collection and analysis happen simultaneously and start with the first interview, first observation, or first document that is read. The multisite case study design employed for this research required a variety of data analysis methods to be employed. Yin

(2014) explained that data analysis of case study data is the most difficult part of utilizing case studies. It is crucial to the research to be well organized.

For the case study analysis, Stake (1995) presents four forms of data analysis and interpretation in case study research: categorical aggregation, direct interpretation, patterns, and naturalistic generalizations. Categorical aggregation is described by Stake (1995) as collecting instances of data, and the researcher hopes that issues will emerge. In utilizing direct interpretation, the study considers single instances and pulls connotation from it without considering multiple instances. The third form of data analysis provided by Stake (1995) establishing patterns and considering relationships in two or more categories. The final form of data analysis presented by Stake (1995) is developing naturalistic generalizations that readers of the case can learn for themselves or apply to populations. These four forms of data analysis were utilized and intertwined with Creswell's (2007) data analysis framework for this study.

The process of data collection is not linear and not a step-by-step process. Creswell (2007) describes the data analysis as a circular or spiral process. A data analysis framework is provided by Creswell (2007) includes the following four stages: data-managing; reading and memoing; describing, classifying, and interpreting; and representing and visualizing. In this study, data and information obtained from a demographics of the institution, semistructured interviews, documents, and field notes were examined for patterns and themes.

Data were carefully maintained for each semistructured interview. For each interview, a detailed record was kept on each person being interviewed, the date and the time of the interview, along with field notes for each interview. Data were collected systematically and logically. Merriam (2009) explains that often basic organization is overlooked because when you are collecting the data, you feel that you will remember the details of what happened. The



interview data were stored electronically and organized in a system that permitted ease of data retrieval. Cleaning the data as it was assembled was part of the process. Data included interview notes, tutoring training manuals, and other data provide by academic support services from the various colleges regarding online tutoring programs. Merriam (2009) notes that an inventory of that data set should be kept so that you know precisely what you have in terms of data.

Coding is that process of making notations in your data that strike you as possibly pertinent for answering your research question (Merriam, 2009). Coding was used throughout the research study on documents. Merriam (2009) suggests that the researcher develop a code to a pertinent scheme to the research as data are collected. Codes that are developed can be assigned to entire documents or segments of documents to help categorize key concepts and maintain the context in which concepts occur (Miles & Huberman, 1994). The codes that were developed are conceptually rich. Bradley et al. (2007) explain that if the codes established are too simple that when they are separated from the context, they will provide limited insight.

At the onset of analysis, the data sources were thoroughly read and reviewed multiple times. This aided me in gaining familiarity with all the data available for analysis and interpretation. Creswell (2007) states that, “The theory emerges with help from the process of memoing, a process in which the researcher writes down ideas about the evolving theory throughout the process of open, axial, and selective coding” (p. 67). Ritchie and Spencer (2002) note that the researcher must go through a process of familiarization with the data. Familiarization is immersion in the data which includes activities such as reading transcripts and studying observational notes (Ritchie & Spencer, 2002).

In the describing, classifying, and interpreting stage, I looked for patterns and themes that had developed. Bradley et al. (2007) explain that recurrent themes emerge from diverse and

detail-rich data. The coding of the data assisted in this process. Lincoln and Guba (1985) describe the interpretation stage as lessons learned. In this stage of interpretation, the researcher should look at the big picture and form meanings of what is going on (Creswell, 2007).

Representation and visualization comprise the final stage of Creswell's (2007) data analysis framework. The data were examined in a variety of ways to assist in uncovering themes. Charts and tables assisted me in drawing conclusions. This approach provides another way to look at the data and uncover emergent themes. Charting was also used to examine the data. Charting is described by Ritchie and Spencer (2002) as organizing data from its original context and arranging according to themes. Charts were developed with a thematic framework from the interview and research questions. Charts were created for each key subject area and entries were made based on the responses from the interview.

#### **TRUSTWORTHINESS, VALIDITY, QUALITY, AND RELIABILITY**

To identify best practices utilized by community colleges to support online learners in the form of online tutoring, a qualitative model was utilized. The paradigm selected for the research is qualitative and the approach to be used for the qualitative research is a multisite case study. Data collection for this study included semistructured interviews, documents, and field notes. Explanation of the strategies that have been selected to maintain the trustworthiness, validity, reliability, and quality of the study are provided.

Academic research must have consistent practices that demonstrate trustworthiness and validity to be considered credible. In a qualitative paradigm, the readers of the study must have confidence in protocols utilized in the data collection process, the data analysis, and the conclusions drawn from the study. A set of naturalistic criteria for determining trustworthiness in research was developed by Lincoln and Guba (1985), including credibility, transferability,

dependability, and confirmability. For this study, these four criteria, developed by Lincoln and Guba (1985), were employed to establish trustworthiness.

### **Credibility**

The first criterion is credibility. Merriam (1998) explains that credibility is the congruence of findings with reality. The findings must be accurate and truthful for the study to be credible. Brink (1993) states that researchers are interested in people's beliefs, experiences, and the meaning they construct in qualitative research. The study must present the multiple perceptions of people in the study and effectively represent them.

This study utilized triangulation as a method to strengthen the credibility of the study. Triangulation is defined by Creswell and Miller (2000) "a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study" (p. 126). Triangulation was used as a step in which the researcher looked through the data to find categories or common themes (Creswell & Miller, 2000). Interviews, documents, and websites of the institutions were reviewed to find major and minor themes. Triangulation is described by Willis (2007) as the qualitative equivalent of validity and reliability.

Two strategies noted by Sandelowski (1993) were employed to ensure the credibility of the study findings. First, Sandelowski (1993) states that qualitative researchers must exhibit clarity regarding thought processes during data analysis and consequent interpretations. Second, Sandelowski (1993) argues that biases in sampling and ongoing critical reflection of methods must be acknowledged to maintain adequate depth of relevance of data collection and analysis. Morse et al. (2002) explain that personal biases must be accounted for that may have influenced findings.

## **Transferability**

The second criterion offered by Lincoln and Guba (1985) is transferability.

Transferability in a study is described as the degree to which research findings can be transferred to another context or situation. Creswell (2007) says, “To make sure that the findings are transferable between the researcher and those studied, thick description is necessary” (p. 204). If the reader of the study has thick, rich descriptions of the data, they can transfer the study’s findings to their context (Lincoln & Guba, 1985; Stake, 1995). The data collection process steps for this study were well documented so that if another community college wanted to conduct similar research, they would have the steps to do so. Interviews provided information about students with different perspectives and backgrounds, which may also provide information that could apply to various situations at other community colleges.

## **Dependability**

Dependability is the third criterion provided by Lincoln and Guba (1985). Miles and Huberman (1994) explain that dependability is having the research performed in a consistent and stable manner. Lincoln and Guba (1985) provide that dependability can be established through triangulation and the use of an audit trail. Dependability was enhanced by using an audit trail for this study. This provided an account of the protocol and processes used in the study. Yin (2014) offers that dependability and reliability are synonymous. The research process was well documented so that it is clear how decisions were made and choices determined.

## **Confirmability**

The final criterion presented by Lincoln and Guba (1985) is confirmability. Lincoln and Guba (1985) explain confirmability as the degree to which the researchers can validate the

research interpretations' objectivity. Confirmability is established when there is a transparent process for data gathering and a clear understanding of why the research was conducted (Stake, 1995). Confirmability was strengthened in this study using reflexivity, an audit trail, member checks, and field notes. Lincoln and Guba (2000) state that reflexivity is "the process of reflecting critically on the self as a researcher, the 'human instrument'" (p. 183).

### **Quality and Rigor**

Mays and Pope (2000) state, "Quality, in qualitative research, is systematic, self-conscious research design, data collection, interpretation, and communication" (p. 52). Strategies were also employed in this study to ensure quality and rigor. Yin (2014) offers four aspects of quality research designs: internal validity, external validity, reliability, and construct validity. A method of securing internal validity is member checks (Merriam, 2009). In a member check, feedback is solicited from the people you interviewed regarding your emerging findings (Merriam, 2009). Maxwell (2005) offers the following:

This is the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say or do and the perspective they have on what is going on, as well as being an important way of identifying your own biases and misunderstanding of what you observed. (p. 111)

### **Validity and Reliability**

After the study's interviews were conducted, member checks were done to examine the emerging findings. External validity is described by Merriam (2009) as the degree to which a study's conclusions can be applied to other situations.

In qualitative research, reliability does not mean that the same study could be replicated and get the same results. Lincoln and Guba (1985) explain that reliability in the qualitative research, the researcher seeks outsiders to agree that given the data collected, the results

collected are both consistent and dependable. Construct validity ensures there is a match between questions presented and the content or subject area that they are intended to evaluate (College Board, n.d.).

Construct validity was achieved by the utilization of triangulation and conducting member checks. The reactions to the findings are incorporated into the study to provide validation (Mays & Pope, 2000).

Yin (2014) argues that the key quality control of a study and its findings relate to the study's validity. A valid study is described by Yin (2014) as "one that has properly collected and interpreted data so that the conclusions accurately reflect and represent the real world (or laboratory) that was studied" (p. 78). Reliability of the study was achieved by maintaining detailed records through interview observations and field notes.

## **Ethics**

Steps were taken in this study to ensure that ethical considerations have been taken into account when planning and conducting research. Institutional Research Board approval was sought through Ferris State University. Yin (2014) notes that in qualitative research, research integrity carries an important role. Readers of the study and subjects will want to confirm that the qualitative researcher has been mindful in conducting their research in an unbiased and accurate manner. Confidentiality of all the study participants was maintained, and all research materials were maintained in a locked filed cabinet. Informed consent was explained to the participants. The information obtained during the study was kept confidential.

## **ROLE OF THE RESEARCHER**

Creswell and Creswell (2018) explain that qualitative research is interpretative research, and that the researcher conducts a sustained and intensive experience with the participants. A researcher must explicitly identify their biases, values, and personal background that may shape their interpretation formed during the study (Creswell & Creswell, 2018). I served as primary data collector and analyst. To reduce the effects of researcher bias, I asked the same questions in each of the semistructured interviews. I did not share any personal beliefs or opinions during the semistructured interviews. My objective is to describe the findings from the perspective of the research participants (Bloomberg & Volpe, 2016).

## **CHAPTER SUMMARY**

This chapter outlined the research methodology for this study, which was a qualitative multisite case study. The purpose of this study was to describe and analyze the best practices in online tutoring that have positively impacted student success in community colleges.

Community colleges were purposefully selected to share their best practices offering online tutoring to increase student success. Semistructured interviews were conducted with eight community colleges that have robust online tutoring programs. The community colleges varied in size and in demographics to gain a holistic view of program offerings.

## CHAPTER FOUR: RESULTS AND ANALYSIS

### INTRODUCTION

This chapter presents the results and analysis of this qualitative case study. The purpose of the study was to understand the best practices used in online tutoring programs to support online learners at community colleges. This study aims to help educational leaders improve student learning and success in online classes through online tutoring support. The research study examined through the vantage point of community college faculty and staff how community colleges can improve student learning and success in online classes. The four overarching research questions of the study were:

1. What best practices can community colleges use to improve learning and success for online courses using online academic tutoring?
2. How are in-house tools and supports used to improve learning and success?
3. How are synchronous tools and supports used to improve student learning and success?
4. How are commercially available tutoring tools and supports used to improve student learning and success?

### INSTITUTIONAL PROFILE

This data and results were collected by conducting semistructured interviews with academic support staff from eight community colleges. I interviewed representatives who worked in academic support at the following institutions: Austin Community College, College of DuPage, Elgin Community College, Estrella Mountain Community College, Madisonville Community College, Montgomery Community College, Santa Rosa Junior College, and SUNY Genesee Community College. These eight community colleges were included in this research



study because they were noted in research or found through purposeful sampling as being active professionals in the area of community college support services. In addition, through my participation in the “Open Forum for Learning Assistance Professionals” Listserve, I identified two additional respondents for the study. Table 3 shows the tutoring platform and availability of tutoring for students.

Table 3: Respondent and Tutoring Platform Profile

RESPONDENT ID	INSTITUTION NUMBER	TUTORING PLATFORM	TUTORING AVAILABLE 24/7
R1	1	Tutor.com	Yes
R2	2	Blackboard Collaborate, Discord, YouTube Live, Zoom	No
R3	3	NetTutor	Yes
R4	4	Upswing	Yes
R5	5	Google Meet	No
R6	6	Microsoft Bookings	No
R7	7	TutorTrac, Who’s-Next	No
R8	8	Cranium Café	No

## RESEARCH QUESTION 1

What best practices can community colleges use to improve learning and success for online course using online academic tutoring?

### Research Question 1 Results

The first research question examined the best practices that community colleges can use to improve learning and success for online courses using online academic tutoring. The feedback

from the interviews included several key themes including support from stakeholders, institutional engagement, and standards for tutoring programs. The community colleges that participated in the study all shared that their online tutoring has been impacted and changed because of the COVID-19 pandemic. All the respondents said they gained knowledge about how to serve online students better through their experience with the pandemic.

### *Support from Stakeholders*

All the respondents described how important it was to sit down with their stakeholders and understand their needs and how they can address those needs. Stakeholder groups that were discussed by respondents included students, administration, staff, tutors, and faculty. In fact, one respondent shared that at their college they purchased software that they had since abandoned because it was purchased without consultation from stakeholders and did not address the needs of the college. When the respondent shared how they made a new start to finding out how to serve students with online tutoring, she said that she sat down with key stakeholders to identify needs and establish a vision of what they were trying to accomplish with their online tutoring program.

Respondents from all the community colleges described the importance of the relationships of campus partners to sustain and maintain a robust online tutoring program. Respondents from five of the eight community colleges discussed the importance of buy-in from faculty to have a successful tutoring program. The faculty were recognized as being key partners in a successful online tutoring program because they were able to promote the online tutoring with students in their classes. One respondent noted:

R4: Faculty buy-in is key. That is how our program grew so quickly and that's because we included faculty when we were going through development, with streamlining what had already been implemented. The first time we sent out a survey to all of the faculty who had participated in the first pilot. Then we sent out a survey to faculty introducing

this program, outlining what we were planning to do, and asking for their input. And we received input, honest input, from faculty, and we were able to tweak the program.

Other comments reinforced the importance of faculty feedback to help developers understand what is needed by the students:

R8: They [faculty] also suggested a calculator workshop. They told us we wouldn't believe how many students are in math classes and can't use a calculator.

R8: And probably number one is to get together with your divisions, with faculty who you're tutoring for, because they will provide the best feedback for you. They will tell you what you can do. For example, we offer study sessions, so we ask the faculty: what can we do to help out your students?

At three of the schools participating in the study, faculty members also serve as tutors, extending the importance of the tutoring function into the classes. Another respondent noted that the main way that they obtain tutors is through faculty recommendation.

R2: We get our tutors through faculty recommendation. Every single person comes to us on faculty recommendation because, for example, I am not a nurse. I don't work in the nursing program. I'm not gonna be able to recommend a good tutor or even find somebody. How would I know? Based on their grades really is not enough to know if they're going to be a good tutor. So, we have faculty recommend folks to us and then we hire them after we interview them, and so that's how we decide who gets embedded in what course.

Faculty support and involvement is not the only necessary component of institutional support. One respondent described the importance of receiving support from administration for the online tutoring program. Administration was able to bring visibility to online tutoring to many groups on campus and in the community. She explained that she regularly receives calls inquiring about the tutoring program because someone heard about the program at a meeting from an administrator, and the person wants to hear more about how it works. This respondent also noted the significance of receiving buy-in from administration to receive the necessary financial support to sustain the tutoring programs:

R4: Of course, with any program or initiative that's being started, you have to get the buy-in of the people who are your leaders at the university and the college because

without their buy-in, you won't receive the support. Not just financial, but you won't receive the support to continue engagement in the initiative that you're doing. [I need] my supervisor and her supervisor, and even the supervisor over him, the vice chancellor. Every chance they get; they're talking about embedded tutoring. They're talking about it in the community, they're talking about it in meetings that they have throughout the college, and it make a difference.

### *Institutional Engagement*

One respondent described that they have what they call a student usability group that has been extremely helpful in providing feedback for the online tutoring program. This usability group is a focus group that is run by the IT department and is used to gather feedback on a variety of campus issues. The respondent explained that if they want to try a new concept, such as appointment scheduling, they would explain it to the student usability group to gain feedback. The group has also provided the academic support team (a campus group that supports online tutoring) useful feedback before implementation.

R1: So, it's run out of our IT Department, and they use it for a variety of different things, but every semester I meet with the group because we want to try something new.... So, we had a meeting with them recently and walked them through the appointment scheduling model that we're trying to use, and they gave us really good feedback on what works, what doesn't, and what they want to see and what kind of confirmation they want to get and all this kind of stuff.

One respondent explained that to maintain good relationships with tutors it is essential to have continuous communication and transparency. During the pandemic, implementation of technology often happened at a rapid pace. At some of the respondents' institutions, one initial step was to outsource some of the tutoring. As a result, there were concerns by campus tutors that they would be out of a job. Two of the respondents noted that it is important to give tutors the ability to practice with whatever online tutoring program is being used so that they can become comfortable and confident with the technology.

R7: I said to my staff: put these [software tools] on your computers and Zoom with each other. Right: Get into Zoom with each other and pretend to have a tutoring session or

pretend to use the tools and just try learning with each other without a student being present, without that pressure of being hot and bothered because there's a student there.

Two of the respondents explained that a benefit that arose from the COVID-19 pandemic was that campuses that had previously worked very independently were forced to work together to create online tutoring solutions and to pool resources. A result of this increased collaboration had positive impacts on their online tutoring programs.

R3: I think one of the things is the collaboration because of what happened. As I mentioned, we have different centers and, in the past, we never talked to each other really. I think we had a level of competition with each other sometimes. Instructors would refer students to use that center instead of this center, and so on and so forth. But when we transitioned online, all of those coordinators were able to coordinate and collaborate, and they started asking “what are you doing,” and so on and so forth.

### *Standards for Tutoring Programs*

Three of the eight respondents discussed using guidance from national organizations for developing their standards and programs in tutoring such as the College Reading and Learning Association (CRLA) and the Association of Colleges for Tutoring and Learning Assistance (ACTLA).

R1: Are you familiar with CRLA? It's the College Reading and Learning Association. They offer a certification, which is great guidance and best practices for all of us in that field.

*Researcher's follow-up: Okay, so all tutors need the CRLA. to be certified, right?*

R1: Well, they don't have to be. So, the program will be certified, which means that we have effective hiring practices, our tutors serve 25 hours or more each semester...they have 10 hours of training according to the training curriculum, and we have to have an effective evaluation program set up. So those are the four pieces we need in order for us to apply for certification. Yes, the program is certified, and then the tutor is recognized if they've completed the 10 hours of training and they've met the 25 hours in a semester of working directly with students.

R6: CRLA is the College Reading and Learning Association, so they're kind of considered to be the end-all; they're the ones who do the certifications and stuff like that.

*Researcher's follow-up: Are there certain resources you pull from that group?*

R6: Yeah, we – the tutoring leaders from across the U.S. – actually have monthly meetings with them. I've presented it at their conferences a couple of times. I usually attend their conferences. I'll be attending their institute this summer, and they pull in resources from everywhere. They're affiliated with ACTLA [Association of Colleges for Tutoring and Learning Assistance].

R7: ACTLA has an online tutoring certification program.

### **Research Question 1 Analysis**

As noted, the responses related to best practices in online tutoring were clustered around the three themes of stakeholder support, institutional engagement, and professional standards. These three themes and the respondents' emphasis support the literature on the importance of support services for online learners.

Supports for online learners have been defined differently by different researchers, but they all emphasize that it is essential that online support services be delivered strategically. Turrentine and MacDonald (2006) stated that the success of online tutoring might not rely as much on the technology selected but on the development of an appropriate culture for online tutoring. The importance of the culture of the support, which was presented in the research by Turrentine and MacDonald (2006), was noted by the respondents in this qualitative study. Lee et al. (2011) investigated three categories of support related to the students' overall satisfaction, including instructional, peer, and technical support. A study by Fredericksen (2018) of online learning leaders at community colleges that received 226 responses reported that the top three priorities of online learning at these institutions included faculty development and training, providing student support, and strategic planning for online learning. Briggs et al. (2020) identified three different types of online support for online students, which included academic and personal support, engagement support, and career-oriented support.

Online tutoring provides a tool for students to engage with faculty, staff, and other students to support their learning. The responses of the participants in the interview explained the importance of engagement. The research of Dolan (2017) identifies three components essential to creating student engagement in online courses: teaching, social, and cognitive presence. Further, it explains that online tutoring provides those three elements of engagement. In the literature reviewed, McClenney et al. (2012) stated, “The Community College Survey of Student Engagement (CCSSE) is built on the premise that student engagement — involvement, integration, and quality of effort in social and academic collegiate experiences — is significantly related to student learning, persistence, and academic attainment” (p. 2). The importance of stakeholder support and institutional engagement were two themes that emerged from the interviews supported by the research of McClenney et al. (2012). The concept that stood out from this study concerning engagement is the importance of academic support services to develop partnerships with faculty, academic advisors, and administration who can collectively promote tutoring services.

The interviews provided insight about standards and certifications for tutoring programs from two organizations, including the ACTLA and CRLA. It was surprising that throughout the research, these two organizations were not noted multiple times. These two organizations have many resources for colleges in the tutoring area. The certification programs provide measurable standards for institutions to attain for their academic support centers. ACTLA saw a need for college and university centers to adhere to effective practices to increase student engagement and student success in distance education (ACTLA, 2020). In April 2019, ACTLA presented online tutoring standards, which included the following four areas: infrastructure, meaningful engagement, training, and assessment and evaluation (ACTLA, 2020). Three of the institutions

interviewed for this study are active members of these organizations and utilize their standards for best practices.

## **RESEARCH QUESTION 2**

How are in-house tools and supports used to improve learning and success?

### **Research Question 2 Results**

The second research question investigated how in-house tools and supports are used to improve learning and success. These responses clustered in two areas: tutor training and embedded tutors.

#### *Tutor Training*

All eight individuals I interviewed discussed the importance of tutoring training for the success of their online tutoring programs. The training is not only on the use of the various software programs that are being utilized but also for ongoing professional development:

R1: We started thinking more about what else we could offer based upon what we were hearing and seeing feedback from tutors, students, faculty, administrators, so we added additional training outside of the technical area on topics like effective communication using chat; how to move a student who is coming in for answers and wants to cheat, to giving them a learning experience; and how to help students get the most out of their tutoring sessions.

R1: We had set weekly meetings as a team and then recorded them for anybody who worked weekends or evenings who couldn't come.

Institution 4 utilizes a software called TutorLingo to train their tutors. TutorLingo was developed in partnership with the CRLA, which was discussed in best practices.

R4: We have purchased a software called TutorLingo where managers can allow their tutors to go through and work through self-paced modules. And some of the managers will support the work as their professional development, if you will, with their tutors, especially if they see them struggling in some area.



R5: I always treat the interview process as part of the training as well, in that we talk quite a bit about what our philosophy is as a tutoring center, how we want to interact with students, etc., just making sure that's something that those new applicants are comfortable with and don't have any questions about ahead of time. Then, once they are all officially hired, I do a training at the beginning of the semester for those new tutors. In a few hours we go through different tutoring scenarios as well as more mundane things like clocking in and all the record keeping and things of that nature. We also bring in the director of our disability services program to talk about working with students who may need accommodations and how the tutoring center can be of service in that regard.

R2: And then if they do become a pro tutor, they do more training on how to help students with study skills. Obviously, peer tutors do that, too, but we want the approach to have a little more of that academic coaching background. So, they read a book by Cal Newport, *How to be a Straight "A" Student*, which is a quick and dirty version of all of the study skills that you could possibly help a student with. If they don't know where to start, there's another module about how to work with students with disabilities that's way more in depth.

### *Embedded Tutors*

In six of the eight interviews, the respondents explained that they used embedded tutors in some format on their campuses. An embedded tutor is paired with a particular section of a course. Embedded tutors are being utilized at those institutions in a variety of ways. Embedded tutors can be implemented in many ways including having a video in the course shell to introduce who they are and how to find them to regularly attending the course that they support as a tutor. Some of the institutions use them in the classes that students are known to have difficulty with, such as math and the sciences, while other institutions use embedded tutors in a majority of their courses. The two institutions that widely used embedded tutors explained that their embedded tutors are hired from faculty recommendations. These two institutions also discussed the benefits of having an embedded tutor in online classes so that students have a specific contact for help and tutoring. The embedded tutors introduce themselves to the classes either by visiting the course if it is a face-to-face or hybrid course or creating a video for a fully online course. Students are provided information at the beginning of the course on how to

contact the embedded tutor and set up appointments. One of the respondents, who has a very robust embedded tutoring program, explained how using embedded tutors has fostered relationships with academic support and faculty.

R2: We have this new classification where we are just calling them embeddings. These are tutors who are not providing review sessions for the course and they are not going to the class, but they have taken the class and we are just with instructor consent embedding them into Blackboard shell and telling them their own responsibility is to do a class visit and be there in the Blackboard shell and then basically what happens is the students will contact them or they will reach out via e-mail. But since you are in the shell and you are on all the emails and you have already reached out and made an announcement, it's just a little bridge over to say, okay, if I need a tutor, I know Dan is my tutor. Dan's in the shell. I've seen his name. This isn't new to me, so rather than trying to find the drop-in tutoring and trying to find the same person that your instructor recommended, this is just a quick and dirty way to connect.

R2: I would say, just get your tutors embedded in the LMS. Get the tutors connected to specific courses and specific faculty members and have them work in tandem. Get the tutors spread out across the digital campus. They should not be sitting in a digital room waiting for students. That's not productive.

R4: The buy-in is the key: the key to embedded tutoring is to have the embedded tutor and the faculty form some type of professional relationship because if they're on the same page, then it's going to flow smoothly for the most part. The students are going to be able to follow suit because the instructor and the embedded tutor are, in fact, talking the same language.

## **Research Question 2 Analysis**

The respondents' in-house tools and support included tutor training and embedded tutors. Tutor training was an essential key to their tutor program for all eight institutions, and embedded tutoring was discussed by six of the institutions. The training methods were varied among all eight of the institutions. As explained by Pardo and Penalvo (2008) and Denis et al. (2004), these themes were seen in the literature and provide the certain competencies and skills that a tutor needs to possess to be effective. The emphasis on training for tutors helps tutors develop these skills noted by Pardo and Penalvo (2008) and Denis et al. (2004). Ryan et al. (2000) states that the online tutor serves as an educational facilitator and must possess certain skills to assist

students. If institutions improve and develop the skills of tutors, it helps improve the likelihood that their time spent with students will be an effective use of students' time to deliver a positive educational experience. Kraft and Falken (2021) explain the importance providing intensive and ongoing training, "prioritizing tutor training through a combination of initial professional development, peer learning communities, and on-the-job coaching is key to supporting continual improvement. Investments in training will be increasingly important as programs work to scale their supply of tutors" (p.8). A study by Gregg and Shin (2021) found that when they asked online tutors about the challenges, they redesigned their online tutor training to include technical solutions, how to be intentional with what they tutee needed assistance with, active learning techniques, increasing their wait time, and keeping students engaged.

Respondent 4 also described the importance of their use of TutorLingo, which was developed in partnership with CRLA. The CRLA provides training for their International Tutor Training Program Certification. Ongoing professional development was an essential part of all tutor training programs at the institutions interviewed. Respondent 2 explained that they use books for professional development training at their institution. One of the books noted by Respondent 2 was *How to be a Straight "A" Student*, by Cal Newport, which they have found particularly helpful for tutors.

Embedded tutors were utilized in various ways at six of the institutions interviewed. The critical factor with the institutions was that the embedded tutor makes their presence known to the students and begins to build a relationship. Respondent 2 emphasized that it is not enough to wait for the students to come to you; academic support should make connections to where the students are. If the students attend fully online classes, embedded tutors need to be actively engaged in the course site on the learning management system. The embedded tutors have at a

minimum their contact information on the course website. Embedded tutors were utilized in the various methods by institutions, from creating an online video and providing their tutoring hours to attending some class sessions. This theme of social presence is supported by the work of Garrison et al. (2000) who identified three key elements of an online community of inquiry which includes a cognitive presence, social presence, and teaching presence. Sung and Mayer's (2012) and Dolan et al.'s (2017) research supported the importance of social presence and building an online community to increase student engagement. Students want a tutor who they recognize from prior contact in some form and to be able to develop a consistent relationship. An embedded tutor provides the social presences and connection that online students desire.

A key to retaining and obtaining new tutors is working with faculty to find tutors in classes. Academic support centers must establish partnerships with faculty. Students have many obligations, such as jobs and family obligations, so it is often difficult to get the number of peer tutors that an institution would like to have. Another difficulty was the low wage that tutors are paid at institutions for peer tutors, and students can often find jobs that will pay a higher pay rate.

A majority of the tutors from all of the institutions in this study were part-time and it would appear that it may be an obstacle to get tutors together for training. One of the institutions noted that they had a standing weekly meeting and recorded their meetings so that tutors who worked evenings or weekends were able to access the trainings. It may be difficult for an academic support center to make sure that all tutors are completing the ongoing trainings if they are not attending the trainings either in-person or synchronously online. A study could be performed to understand the topics of tutor trainings that are done at community colleges and how those tutor trainings are assessed.

### **RESEARCH QUESTION 3**

How are synchronous tools and supports used to improve student learning and success?

#### **Research Question 3 Results**

The third research question considers how synchronous tools and supports are used to improve student learning and success. The institutions interviewed used a variety of synchronous tools and supports to improve student learning and success (see Table 3).

Institution 1 uses Tutor.com to provide online tutoring for students and utilizes Tutor.com as the platform for both in-house tutors and Tutor.com's tutors. Institution 1 wanted the students to have a seamless experience with tutoring and did not want the students to have to jump to multiple platforms or websites depending on the time of day they were seeking tutoring. Students log in to one website to meet with a tutor. If Institution 1 has a tutor that available, they will meet with the student. If Institution 1 does not have a tutor available, then a Tutor.com tutor will meet with the student.

R1: We have our [Institution 1] tutors and Tutor.com tutors supporting students in the same place, which is huge access for our students. What we found when we had a separate setup for them that it wasn't a problem when we were in a drop-in situation on campus because the students were on campus, they would just come to the tutoring center and get their support. We were very active support centers; we have two centers physically located on our two campuses. But when we moved online, initially we had separate platforms. It was too clunky to get students to access that service. So, eventually, when we put all our tutors on the Tutor.com platform, they were signing in and easy access.

Institution 2 uses a variety of platforms to provide online tutoring for their students. Each tutor can decide what works best for them and the students. The academic support center ensures that the tutor has a flyer, that the tutor sends an e-mail introducing themselves to the faculty member and makes sure the tutor has meeting times established.

R2: We make we make sure they have a flyer. We make sure that they send the email out to the faculty member. We make sure they set up delivery times to meet with the students. But then, how they go about doing that is up to them ultimately: if they end up wanting to have sessions on Blackboard Collaborate, or Zoom, or Discord, or YouTube Live, or whatever they want to do.

R2: Basically, we're an octopus. We have 70 tutors, aged 17 to 80 years old. And they are all from different disciplines. So, the key for us has been to be extremely versatile and extremely individualized. What works for the motion picture television program is not going to what would be what works for the auto department.

Institution 3 utilizes NetTutor to provide online tutoring to students. NetTutor is the platform that is utilized by both the in-house tutors of the institution and the tutors from NetTutor:

R3: We are offering in-house online tutoring, and we use Pisces as our platform. In terms of the function, it works like this: when students use Pisces or NetTutor, in terms of appearance they look the same. NetTutor is available more or less 24/7 so they are always available. You know, if students would come to Pisces there are times when we don't have an available tutor; they may be fully booked, so then can go to NetTutor.

Institution 4 uses a tutoring platform called Upswing, which is a tutoring platform that can be used by both in-house tutors and tutors from Upswing. This provides students tutoring services in the late hours and additional weekend hours.

R4: We do contract out with a tutoring platform called Upswing, and we do pay for hours with their tutors. Basically, we utilize their tutors for after hours, 1:00 am, 2:00 am, 3:00 am, when we do not have tutors scheduled.

Institution 5 utilizes GoogleMeet for their tutoring sessions. This institution does not have tutors who are contracted outside the college and did not have synchronous tutoring prior to March 2020 and the start of the pandemic.

R5: As far as online tutoring goes, we are using GoogleMeet for our sessions and really the genesis of all of that was when everything started closing in March of 2020. Previous to that, we didn't have many online tools that we were using specifically for tutoring.

Institution 6 had a success coach who attended the National College Learning Center Association conference and learned how other institutions were using Microsoft Teams. At this

institution, the tutors use Microsoft products to facilitate tutoring sessions. The tutors use Microsoft Surface Pros, which have whiteboard screens they can write on.

R6: Since we were working from home, I started playing around to see what I could find. I found Microsoft bookings, Microsoft teams, and the whiteboard. I just started trying all of this stuff together and built it from the ground up.

Institution 7 currently uses TutorTrac for online tutoring. This institution does not outsource any tutors. At the time of the interview, Institution 7 indicated they would be moving to Who's-Next, which is a cloud-based student queuing and visit-tracking software.

R7: So, right now, TutorTrac is serving multiple purposes across the campus; our testing center is using it, our student activities office is using it, and our fitness center is using it, all for different purposes. But I am the only administrator on campus. So, what we were looking for was a service package that can meet the needs of multiple offices across campus. So, we found Who's-Next, which was actually built for a college in San Antonio, Texas.

R7 explained how her institution will be using Who's-Next:

R7: It's a software solution, so students can create an appointment anywhere across campus using the same portal. They just choose which office they want to make an appointment with and then everything is offered through there. And not only that, we can also share records. So, if I want the advisors to be able to see tutoring records, we can set up that ability to have case management. Initially we're going to use Who's-next in tutoring, testing, counseling, access, and accommodations.

Institution 8 utilizes Cranium Café by ConexEd for their online tutoring session. ConexEd provides a platform that is a case management, scheduling, and communication software. Students go to a virtual lobby and state what class they need help with and then wait in the virtual lobby until a tutor is available. If students want to meet with an advisor, they will go to a different virtual lobby.

R8: So, it's similar to if you go to the doctor's office, you're waiting in lobby area. It's the same concept: the tutor would call them into their cafe and then do a tutoring session that way. So, it was a great way to replicate that in-person service without needing to make an appointment.

[So far] we've been pretty happy. It's been great at getting the students in, where, in a sense, they don't have to wait. They don't have to make an appointment. Usually, if they

have to go that extra step, more likely students will say, “I just don't have time to make an appointment. I just want to go in and see a tutor and then leave.” So, this is why we chose that system.

### **Research Question 3 Analysis**

The responses from institutions revealed that they used various synchronous tools and supports to improve student learning and success. Research by Hrastinski (2008a), Stein et al. (2009), and Falloon (2011) noted that students view synchronous interactions positively because they receive instant feedback, they can see their classmates via a videoconferencing platform, and they feel more engaged in the course, which supports the prevalent use of synchronous tools. Craven’s (2020) findings suggest that synchronous tools and supports for synchronous online sessions can offer benefits such as increased overall connection to the course, engagement, and student retention.

The world has changed since COVID-19, causing student needs to change as well. Institutions must consider how to serve students who need flexibility for various reasons. The institutions interviewed for this study are trying multiple platforms that they may have utilized before or after the pandemic. They want to provide a flexible learning experience that works for them and, at the same time, increase the number of students who can attend online tutoring. Institutions discovered that online tutoring is used by students who were taking online classes and by students who may have transportation issues, family issues, or work issues that prevented them from utilizing in-person academic tutoring in the past. Two of the institutions use software tracking platforms that have virtual waiting rooms, such as Cranium Café and Who's Next, for online tutoring and other campus services.

It is essential to measure the students’ success against the tools implemented to understand the value of the investment in the tools employed. A quantitative analysis could be



done to gather data on the number of students utilizing the tools and the grades that the students receive. A survey could also provide valuable data that understands faculty and student satisfaction with the tools that have been implemented to understand future improvements and enhancements that can be made to improve student success.

#### **RESEARCH QUESTION 4**

How are commercially available tutoring tools and supports used to improve student learning and success?

#### **Research Question 4 Results**

The fourth research question asked how commercially available tutoring tools and support are used to improve student learning and success. Of the eight institutions interviewed, three of the institutions use commercially available tutoring services to supplement their in-house tutoring offerings. The commercially available tools utilized were NetTutor, Tutor.com, and Upswing. The institutions that utilize these platforms mainly do so to serve students who need help outside hours provided by the institution. The three institutions using these services expressed the need to provide services to students at nontraditional hours particularly online students who may be working on homework. When one of the institutions rolled out their commercial tutoring platform, they discussed concerns from their staff about tutoring being outsourced. Two institutions discussed how they are switching to commercially available packages designed to support multiple student service needs. One of the respondents explained how the commercially available software could provide valuable reports so they could use the data to understand the needs of the students.

R1: Being online, we've learned a lot of new things. For example, about students using the service inappropriately, either with academic integrity issues or using it as a teacher

instead of as a tutor. As a result of that, we did put a cap on our use, and we've gotten better about monitoring the cap. So, we get a daily report from Tutor.com that tells us when someone is has reached 15 hours of tutoring. We immediately reach out to that student and share other resources available to them.

R3: Prior to March 2020, we already had NetTutor as our online tutoring service that we provide for our students. This was the only online tutoring platform we provided our students prior to the pandemic. A majority of our [college]-based tutoring services were at that time offered in person.

R4: We do contract out with a tutoring platform called Upswing, and we do pay for hours with their tutors. Basically, we utilize their tutors for after hours: 1:00 am, 2:00 am, 3:00 am.

One of the respondents expressed the concern that in-house staff had when they rolled out the commercially available platform.

R1: I did have a lot of work to do to build a rapport with the staff because they really thought that their jobs were going away. The college kept pushing Tutor.com and the physical people who were on our campus were like, were they outsourcing our role. Now are we not going to work anymore? So, we really had to let them know that Tutor.com is an additional support service for students who don't have the ability to come to campus for a variety of reasons. That most community college students have their parents, their children of parents who are elderly, they are all, you know, all the issues that students have. So, we had to work really hard with that. And so, it was a little bit of relationship building on the part of us with Tutor.com and our tutors with Tutor.com. I think we have a really nice rapport with them now.

Two of the institutions explained why they went to platforms that service multiple student supports. One respondent explained why they decided to switch from TutorTrac to Who's Next and the second respondent explained why they started using Cranium Café.

R7: So right now, TutorTrac is serving multiple purposes across the campus. Our testing center is using it, our student activities office is using it, our fitness center is using it all for different purposes. So, what we were looking for is software or software as a service package that can meet the needs of multiple offices across campus and so Who's Next actually built for a college in San Antonio, Texas. It has actually become, I can't remember which college it is, but has become a campus-wide software solution and so students can create which office they want to make appointments with and then everything is offered through there and not only that, but we can share records. So, like if I want the advisors to be able to see tutoring records, we can set up that ability to have that case management happen. Initially we are going to use Who's Next for tutoring, testing, counseling, access, and accommodations.

R8: ConexEd is the company that supports Cranium Café, and it is a student-support function that allows a student to go online and meet with an advisor or somebody from student business services if they needed to chat with somebody. They could just log on really fast and sort of knock on that person's door, then you would invite me into your café, and then we could discuss whatever we needed to discuss. We wanted to replicate what a student would experience when they come in for in-person tutoring. Meaning that they could just walk in, sign in, and then sort of go to a table or have tutor assist. So Cranium Café works that same way. The way we set it up is that we just provided a link for the students.

One of the respondents described how using the commercially available software

Upswing is able to provide valuable data and information on the students that are being served by the tutoring platform.

R4: It gives us data about on average how many students are being tutored so at any given time, I can go into my admin screen and I will know the exact number of students that have been seen that day. It also gives students an opportunity to leave feedback about their tutors and the tutors to leave feedback about the students. So, at any given time, I can just put in the date range that I want, and I can view all of the feedback that has been shared. If we want to look at how many abandoned sessions we have, if we see a pattern with a particular student, the manager can reach out to that student and try to figure out what's going on with the student.

Another respondent shared that it was important not to come to a rush judgement about what will serve the needs of the students best. This respondent found using an in-house solution through Microsoft worked best for her college.

#### **Research Question 4 Analysis**

Three of the institutions interviewed stated that they utilized commercially available tutoring support during hours when they did not have in-house online or on-campus tutors. These institutions wanted to provide students with tutoring support when they needed to provide a flexible learning experience. Institutions need to understand who they serve and what they are trying to accomplish to serve them best. Shea (2005) provides the best practices for designing

online support services, which are student-centered, blended, personalized and customized, customizable, convenient, and just-in-time. The three institutions in the study provide tutoring support to students during nontraditional hours that work for students' schedules. This practice is congruent with the research of Moisey and Hughes (2008), which reported that the online ideal learning environment seeks to develop the learner's independence and enable the learning process by providing flexible, accessible, and readily available support needed.

One of the institutions that utilized outsourced tutoring carefully monitored students' use of the platform to check in with the student if a student exceeded a certain number of tutoring hours. If a certain number of hours were exceeded, academic support would follow up with the student to ensure that they were not struggling academically and needed more support. The institution wanted to make sure that the students were aware of other support available to students. This practice is supported by the research of Lee et al. (2011) and Mechur Karp (2016), which provided four nonacademic support mechanisms for helping students, which included creating social relationships, clarifying aspirations, enhancing commitment, developing college know-how, and making college life feasible.

When an outsourced service is implemented, it can often cause angst that jobs will be lost because of the outsourcing. One of the institutions explained that when they implemented an outsourced service, this did cause uneasiness that jobs would be going away. When an outsourced service is employed, explaining why this course of action is being taken and the impact it will have on jobs is essential. It is often difficult for institutions to find tutors during standard hours, so an institution needs to explain how a 24/7 outsourced service will be utilized.

Budgetary constraints may limit an institution's ability to adopt an outsourced service. The expense an institution incurs may not provide the payback on the investment if students do

not utilize the outsourced tutoring service. A study of hours most beneficial to the greatest population should be followed.

## **CONCLUSION**

The focus of this research study was to identify best practices of community colleges that offer online tutoring to support their online learners. I conducted eight semistructured interviews with participants who hold positions in academic support from community colleges. The participants' responses were recorded and mapped to the research questions. Qualitative coding was utilized to identify themes. All the participants in this study were qualified for this study based on research criteria. Chapter Five will provide implications and conclusions of the data analysis presented here and recommendations for further research.

## CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

### INTRODUCTION

The purpose of this qualitative multisite case study research was to identify best practices of online tutoring at multiple community colleges. Eight community colleges were purposefully selected to participate in semistructured interviews that have robust online tutoring programs. The institutions varied in demographics and size to gain a rounded view of online tutoring programs. The information gained from this research is intended to provide community colleges with effective practices for implementing online tutoring at their institutions. The analysis in Chapter Five presents findings and recommendations for developing best practices and recommendations for further research in this area of study based on each of the research questions.

### SUMMARY OF THE RESEARCH STUDY

This study aimed to identify best practices utilized by multiple community colleges' online tutoring programs to develop a comprehensive program at my institution. Literature provides information on supporting the online learner, but very little research exists on implementing online tutoring programs at community colleges.

The COVID-19 pandemic thrust many institutions into adapting online support tools for online learners at a rapid pace. The research was conducted from the vantage point of community college faculty and staff to understand how community colleges can provide online tutoring to improve student learning and success in online classes. Four overarching questions were

answered in the semistructured interviews with the participating institutions. As community colleges look to increase success in online learning, they must direct their efforts on increasing access, enhancing online pedagogies, maintaining a strong teacher presence, and expanding the student and faculty support systems (Levy, 2017). First, I sought to understand best practices that community colleges can use to improve learning and success for online courses using online academic tutoring. Research confirms the importance of developing community in online learning and its impact on students. Dolan et al. (2017) explained that creating community in an online course is essential to realizing student engagement. Second, I inquired about how in-house tools and supports were utilized to enhance student learning and success. Research has found that students view synchronous interactions positively because of the instant feedback they receive, they are able to see their classmates, and they feel more engaged in the course (Falloon, 2011; Hrastinski, 2008a; Stein et al., 2009). Third, I asked institutions how synchronous tools and supports are used to improve student learning and success. A favorable online learning environment seeks to develop the learner's independence and facilitates the learning process by having supports that are easily accessible when needed (Moisey and Hughes, 2008). Finally, I sought to understand how commercially available tutoring tools and supports were utilized to improve student learning and success.

## **KEY FINDINGS**

### **Research Question 1**

What best practices can community colleges use to improve learning and success for online courses using academic tutoring?

## *Conclusions*

The goal of the first research question was to identify best practices that community colleges can utilize to improve online courses using academic tutoring. All the interviews with the institutions expressed that what they were doing after the COVID-19 pandemic has changed in order to serve students better. The world has changed, and the students' needs have changed. Students have found value in the flexibility of online tutoring. The flexible learning experience with online tutoring has helped online learners and students who attend face-to-face courses. Online tutoring can be an option for students who have transportation or family issues that would prevent them from attending tutoring on campus. Three themes emerged from the interviews: support from stakeholders, institutional engagement, and standards for tutoring programs.

The importance of support from stakeholders at the institution was a theme that emerged as a best practice. Stakeholders at institutions include students, administration, staff, tutors, and faculty. Institutions discussed their relationships with their stakeholders and how those relationships helped students become aware of online tutoring. Students who attended tutoring and found tutoring helpful were valuable in talking to other peers about online tutoring. The administration, who were aware of the online tutoring offerings, were also helpful in spreading the word to others across campus at various meetings. It was helpful for administrators to support and encourage the online tutoring program because of the many different aspects of the college they reach. Faculty were critical to successful online tutoring programs because of their ability to promote this service with their students. The faculty and advisors directly connect with the students and can reach out and understand their needs with online tutoring. One of the institutions discussed holding a meeting with faculty each semester to continue connecting and understanding the needs of the students and the faculty.



Institutional engagement is a highly valued practice of online tutoring. The online tutoring program benefits if the administration, faculty, staff, tutors, and students are involved in the online tutoring program. When the administration understands and is informed about what the online tutoring program provides, the administration can help communicate to the entire campus community the benefits of online tutoring. Faculty provide a key role in providing input on what students need to know to be successful in their courses. A partnership between the academic support center and faculty is essential so that academic support understands the students' needs and faculty requirements. Advisors and counselors must be informed about what is offered for students in terms of online tutoring so they can communicate this information to the students they advise and counsel. If the academic support center has good relationships with its tutors, they can gain valuable knowledge from their tutors. The tutors are the eyes and the ears on the ground who meet with the students and understand their needs. At one of the institutions, the tutors were given considerable freedom to determine what online platform they utilized to best meet the needs of their students. One of the institutions, for example, had a formalized group of students that they meet with to discuss academic support needs. Online tutoring programs must be designed to fit the needs of the students.

Online tutoring programs of three of the eight institutions discussed helpful guidance from national organizations, including the CRLA and the ACTLA. The CRLA provides professionals the ability to earn tutor and peer educator certifications. The College Reading and Learning Association (n.d.) provides the following three benefits for earning certification, which include:

1. Certification provides recognition and positive reinforcement for tutors' and peer educators' successful work.

2. Certification sets professional standards of skill and training for tutors and peer educators.
3. Certification augments program credibility for administrators and institutions.

The ACTLA (2020) provides principles, standards, and effective practices for online tutoring divided into four categories: infrastructure, meaningful engagement, training, and assessment and evaluation. The guidance from national organizations provides identified effective practices seeking to maximize student engagement and success with online tutoring.

### *Implications*

To develop an effective online tutoring program, institutions need to seek the support of their stakeholders, including students, administration, staff, tutors, and faculty. Buy-in from all levels of the institution helps promote the online tutoring program and bring awareness. In order to gain support from all levels of administration, it is essential to keep everyone informed of what is being offered to support students with online tutoring. Academic support must actively engage all levels of the institution to best support an online tutoring program. One of the institutions discussed regularly hosting faculty for breakfast or an informal lunch to discuss what was happening in the academic support center. The institution stated that having designated times to sit with stakeholders and discuss what they were offering and inquiring how offerings could be improved provided valuable feedback to the academic support center. These meetings also helped gain buy-in from stakeholders because they understood what was going on and were able to spread the word throughout campus. Fostering a connection between academic support and faculty, administration, tutors, students, and staff is beneficial to bringing awareness to an online tutoring program. Institutions should seek to understand the standards developed by national organizations such as the CRLA (2021) and the ACTLA (2020) to establish effective online tutoring. The CRLA offers a certification program for tutors.

## **Research Question 2**

How are in-house tools and supports used to improve learning and success?

### *Conclusions*

The second research question identified two areas of tools and supports used to improve learning and success, which included tutor training and embedded tutors. Training of tutors is essential to conduct a quality tutoring experience for students. All of the institutions in the research have a structured training program for their tutors and discussed the importance of ongoing training and development. A structured training program provides tutors with methods for conducting online tutoring using the institution's technology. The institutions varied in amount of time training their tutors. Institutions should review the guidance for training provided by the ACTLA and the CRLA. Two of the institutions utilized TutorLingo, an online training with nine workshops to train tutors, which was developed in coordination with the CRLA (Innovative Educators, n.d.). The TutorLingo workshops were developed to meet the CRLA Level 1 certification requirements (Innovative Educators, n.d.). Embedded tutors directly connect the student between the course and a tutor. If a course has an embedded tutor, it may eliminate some of the hurdles that a student may face in finding out how to find a tutor for the course. An embedded tutor can be a bridge between academic support and faculty members. The embedded tutor has direct contact with the course faculty member and is front-facing with the student. A direct connection is provided between the tutor and faculty, which can increase collaboration. The instructor and the tutor must establish when a student should see a tutor and when a student should see the instructor. If the instructor creates clear guidelines, it is helpful for the students and reduces potential confusion. The student's time may be minimal, and the instructor and tutor

should establish procedures so that the student's time can be well spent getting the help that the student needs.

### *Implications*

Institutions should ensure that tutors are trained in research-based practices to provide a quality learning environment for the students. Academic support should utilize principles, standards, and effective practices developed by the ACTLA and the CRLA. The ACTLA (2020) and the CRLA (2021) offer resources to establish, improve, and expand tutor training. The CRLA certification programs provide recognition for achieving professional skills and training standards, and the CRLA certification also provides credibility for the institutions that conduct the certification.

Embedded tutors provide online tutoring programs with an easily recognizable connection between the course and academic support. The practice of having an embedded tutor gives convenient access to the student. An embedded tutor can develop a relationship with the faculty member, which allows the faculty member to provide specific recommendations to the embedded tutor about the course. When a student meets with an embedded tutor, the tutor has the context of the course. It is advantageous to have an embedded tutor who is aware of course content and the instructor's expectations as opposed to an outsourced tutor who may need to be more familiar with the course materials and expectations.

One of the obstacles expressed by institutions was maintaining tutors. A student who attends a community college does not most likely spend as much time there as at a university, so the turnover of students is faster. The institutions expressed that it is a challenge that the student employees turnover quickly. Another challenge of the institutions is finding funding to pay the tutors an adequate wage to maintain enough tutors. One of the institutions reported that it is

difficult to find tutors for areas such as nursing because a person who would be qualified can earn a more competitive rate elsewhere.

An issue that could be researched is the impact embedded tutors have on courses and their level of involvement with students. Embedded tutors were used to varying degrees and methods in the institutions that were in the research. The level of training a tutor receives and how that impacts the course success rates is another area for potential research.

### **Research Question 3**

How are synchronous tools and supports used to improve student learning and success?

#### *Conclusions*

The third research question examined how synchronous tools were utilized to improve student learning and success. A variety of platforms were used by the eight institutions interviewed. One of the schools did not limit tutors to one specific platform. At that school, the tutor was able to choose the platform that worked best for them and the students that they served. These three institutions had 24/7 online tutoring support for their students and outsource their tutoring during late evening or weekend times when they do not have in-house tutors available. Tutor.com, NetTutor, and Upswing were the three platforms outsourced by the three institutions. Institutions used a variety of in-house platforms, including Google Meets, Microsoft Bookings, Blackboard Collaborate, Discord, YouTube Live, and Zoom.

One of the institutions was moving from TutorTrac to Who's Next in the fall. Who's Next and Cranium Café are online waiting rooms used for various student services as well as online tutoring. A student may log in to the platform and want to see a tutor, meet with an advisor, or talk with someone in financial aid. The software of virtual waiting rooms can provide

data on things such as the number of student visits, students wait times, and track length of student sessions.

### *Implications*

Institutions have a wide variety of platforms that they can select to utilize for online tutoring. Some institutions felt it was essential to have the same platform used by the in-house tutors and the outsourced tutors to be consistent, while other institutions did not feel this was important. For one of the institutions, it was most important that the tutors and students were comfortable with the online tutoring platform tool, which could change from course to course. Although it is convenient for the tutor to be able to utilize the platform that they are comfortable with, it may be problematic for the student if they are switching between various platforms depending on their classes to get tutoring help. Some institutions focused on consistency in platforms, and other institutions wanted to be able to quickly implement a solution that would work in that course for the tutor and the tutee. Institutions need to be nimble and responsive to what works for online tutoring for their students. Online tutoring is not only for students taking online classes, it is also for student who are taking face-to-face courses who are unable to get back to campus for tutoring. Thoughtful input from students, staff, tutors, faculty, and administration is essential when deciding what tool(s) will be utilized by the college. One institution was using software for online waiting rooms for various student services, including online tutoring, and another institution was moving to this type of platform in the fall. These institutions were moving to these platforms to have one application for many services that students would become familiar with and better track student visits to student services.

Further research could be on how synchronous tools are used to increase student success. The success rates of students who use synchronous tool in courses could be compared to those

that do not. The frequency that students utilized tutoring could be compared to success rates of the students. Another study could evaluate the training programs at community colleges to see the impact on student success.

#### **Research Question 4**

How are commercially available tutoring tools and supports used to improve student learning and success?

#### *Conclusions*

The fourth research question looked at how commercially available tools and supports are used to improve student learning and success. Three of the eight institutions utilized commercially available tools to supplement their in-house tutoring offerings. These three institutions felt it was important to offer on-demand tutoring support.

#### *Implications*

For 24/7 online support for students, colleges may consider outsourcing a service. An institution should survey the needs of the students to understand if offering such a service would be helpful to students. It is critical to understand if the institution's population of students would utilize this 24/7 service and if this is a valuable investment. There are many factors to consider for institutions when evaluating an online tutoring platform that is outsourced, such as the number of subjects offered and how it fits with the courses that the institution offers, the cost, the number of hours the outsource company would provide, the technology required, and the commitment the service has to academic integrity. Adopting a 24/7 online support service for students is a complex decision and can be cost-prohibitive for some institutions. Community college students often juggle many responsibilities, so it is helpful to be able to support students who may not be able to get to campus or take advantage of the institution's online tutoring hours

offered at more traditional academic support times of the day and evening. A tutor affiliated with the institution may be more in tune with the expectations and the curriculum than an outsourced tutor. There may be some more time spent with the outsourced tutor trying to explain the student's needs and the assignment's content.

One of the institutions provided students with fifteen hours of tutoring from an outsourced service. If the student reached the limit of fifteen hours, the academic support team from the college would reach out to the student to understand what additional support they could provide the student. It is helpful that the institution can monitor the number of hours the student is utilizing so that they can intervene and find out why the student is utilizing so many tutoring hours. There is a balance between understanding if the student is appropriately using the service and intervening and making the student feel self-conscious about utilizing the tool because they are using more hours than the average student.

#### **LIMITATIONS OF THE STUDY**

I identified community colleges to conduct semistructured interviews with at the onset of the study that were noted in research or through purposeful sampling. During the study, I needed to replace some schools because of a lack of response from some of the schools that were initially selected to be interviewed. At the beginning of the study, I identified six schools to be interviewed. After I found that two schools could not be interviewed, I found two schools as equivalent replacements. One of the schools was not responsive to requests to be interviewed, and one of the schools had a lengthy process to be able to schedule an interview. Time constraints prohibited me from further pursuing an interview with the institution that had a lengthy process. Since the schools were found from purposeful sampling, I decided to interview eight community colleges instead of six to increase the sample size.



When the interviews were conducted, many COVID-19 protocols were in place, and many institutions were not granting in-person interviews. The interviews were conducted via WebEx, a video conferencing tool. I did not make any site visits to the participating institutions. Finally, at the time of the study, I worked as a faculty member at a community college and brought personal experiences and biases about online tutoring programs that may have inadvertently influenced this study. Although I attempted to maintain neutrality throughout the study, I may have been impacted by my personal experience of working with academic support and the online tutoring program at my institution. At my institution, implementing a robust online tutoring program has been a priority for academic support.

#### **DELIMITATIONS AND RECOMMENDATIONS FOR FURTHER STUDY**

I selected a qualitative case study method to identify best practices utilized by community colleges for online tutoring programs. There is limited information on online tutoring at community colleges, so this study sought to understand what innovative practices were being implemented. This study was conducted from the standpoint of academic support staff. A recommendation for further research would be to replicate this study from the perspective of tutors, students, and faculty. A study could be performed on the types of technical difficulties that students encounter.

Further research could focus on a different population, such as students, faculty, or tutors using quantitative or qualitative study methods. A qualitative study could be done with students who utilize tutoring to understand what they see as the most helpful to their academic success with respect to online tutoring. Either a quantitative or qualitative study could be done with tutors to know what they view as the most beneficial online tutoring tools for students based on their interactions with students. Another study could be performed at institutions that utilize

tutoring training programs and analyze how the training impacts their tutoring program or individual tutoring offerings. On-site visits could be a part of a study design to observe how tutors and students interact during tutoring sessions. Faculty could be interviewed to find their perspective on what best practices could be implemented into a tutoring program that could improve an online tutoring program.

This study selected community colleges noted in research or obtained through purposeful sampling. It would be interesting to examine online tutoring in one state and compare the similarities and differences offered at community colleges within the same state with a robust community college system. Another recommendation is to study several community colleges utilizing the same outsourced platform to compare student success rates. Community colleges were selected for a study on online tutoring based on the percentage of online students enrolled. In my interviews with the community colleges, they stated that it is not only online students utilizing online tutoring. A quantitative study could be done at community colleges to understand the demographics of students using online tutoring to serve the needs of those students.

A recommendation for further study is to perform a quantitative study on the success rates of community college students who take online classes and utilize online tutoring. A study could compare the number of hours a student utilizes to understand if there is a tipping point to improving letter grades. Another quantitative study could examine student retention and completion rates for online students who use tutoring.

The sample size of this study was limited to eight institutions. A future study could include a larger sample size or have a sample that was limited to institutions of a certain population or college setting. Another study could understand the costs of a tutoring program for

an institution. Smaller institutions may or may not have the resources to invest in commercially available software.

## CONCLUSION

The onset of the COVID-19 pandemic pushed higher education institutions to rapidly adopt online tutoring out of necessity. The representatives from the community colleges that took part in this research study expressed how they learned from this time to continue developing impactful and beneficial practices for students who are participating in online tutoring. Online tutoring provides tutoring services for students who cannot come to campus for a variety of reasons. Online tutoring serves the needs of students who are taking online courses and those who are taking face-to-face classes because of work or family obligations. This study's significant findings and recommendations related to each of the four research questions were presented. The conclusions and implications of this study were presented, and the conclusions are summarized below:

1. To better serve the institution with online tutoring, the college should seek support from stakeholders, seek institutional engagement, and establish standards for tutoring programs.
2. Two sources of in-house tools and supports that are used to improve learning and success in online tutoring include tutor training and embedded tutors.
3. Various synchronized tools were used by institutions to support online tutoring. Institutions should spend time to consider what synchronous tools work best for their student population. Institutions may consider the need to provide 24/7 support for their students with an outsourced vendor. Two of the institutions were utilizing software platforms that include virtual waiting rooms and include the ability for students to obtain access to many student services including online tutoring.

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