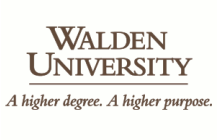

2015

Skype as a Scaffolding Tool for Underprepared Freshmen English Composition Students

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This is to certify that the doctoral dissertation by

Denise Ogden

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2015

Abstract

Skype as a Scaffolding Tool for Underprepared Freshmen English Composition Students

by

Denise Ogden

MA, Troy University, 2003

BS, Augusta State University, 1998

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Education

Walden University

May 2015

Abstract

Nontraditional students enrolled in online courses tend to drop out within their first year because they do not have the basic literacy skills or essential college skills needed for success. They often need the guidance of an online instructor. The purpose of this case study was to explore the perceptions of instructors and students about the effectiveness of Skype as a scaffolding tool for increasing academic achievement for underprepared students in online remedial English composition courses through interactions with their instructor. The conceptual framework included Bruner's cultural-psychological theory of education, Vygotsky's social constructivist theory, and Siemens's connectivism theory. The study was centered on 4 research questions; the first 2 focused on students' and instructors' perceptions of student writing based on student-instructor Skype interactions, and the last 2 concentrated on students' and instructors' perceptions of Skype's effectiveness to scaffold English composition skills to remedial online students. The data sources were 6 student interviews, 2 instructor interviews, and 12 audio recordings of Skype sessions. Data were analyzed for patterns and themes using open coding. The key findings were that students and instructors perceived the Skype interactions created changes in students' writing because of ease of use, indispensableness, rapport, and skill acquisition. This study may affect positive social change by informing online instructors and other personnel of online institutions of higher education about the importance of real-time interactions between students and instructors and providing services for underprepared students using Skype to help enhance their learning of critical writing skills.

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Dedication

This remarkable achievement is dedicated to my mother, Mary Frances Ogden, my two deceased grandparents: Moses Ogden and Hazel Bell; may you rest in peace. It is also dedicated to my loving grandparents: Minnie Ogden and Frank Bell. God Bless each of you for instilling in me the drive, perseverance, and dedication to accomplish such an amazing goal!

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The completion of this dissertation meant a lot to me and the people who stood beside me meant even more. I thank my husband, Myles Darling, for waiting with patience and understanding, cooking hot delicious meals, and delivering them to my desk, while encouraging me to keep on. I thank both of my sons who supported me without realizing it. They respected the office door being closed and never interrupted unless there were emergencies. I appreciate my oldest son, Kaleb Ogden, for running errands, solving technical problems that sometimes hindered my ability to compose, and for rewarding me when I was done for the day by playing my favorite music. I am thankful for youngest son, Myles Tyler Darling, for making sure his friends were quiet whenever they came to visit while I pounded away on the keyboard, and when I became frustrated with writer's block, for putting on my favorite sitcom and laughing with me because we discovered and shared an understanding that "laughter cures." I am also thankful to the rest of my family and friends who cheered me on. I am grateful for the expertise of Dr. Andrew Thomas—thank you! Last, but certainly not least, I thank Dr. MaryFriend Shepard for being firm, holding me to high standards, and for guiding me with her expert advice and opinions. It was our way of communicating through Skype that made this study possible and for that I will be forever grateful. God Bless!

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Chapter 1: Introduction to the Study

Although many students are gravitating towards online courses, these learning experiences can be challenging because they lack human interaction, are superficial, and can lead to misguidance (Murphy, 2010). Kno and Boswell (2011) discussed a study in which U.S. respondents showed an increased demand for online courses and programs over face-to-face courses. Gabriel, Campbell, Wiebe, McDonald, and McAuley (2012) found that because students integrate communication technologies into their personal lives, they automatically expect that universities will use these tools. Many students entering online courses are nontraditional, and therefore, may be poorly prepared and cause challenges for online universities, particularly instructors. Faculty of online universities must find solutions to meet the needs of such students (Kno & Boswell, 2011). In this study I explored the perceptions of two online instructors and six underprepared students about using Skype interactions to improve students' writing in online remedial English composition classes. Skype was selected for this study because the online university included it as a part of its learning management system particularly to help improve the learning experience of underprepared students, and because, as Mongillo and Wilder (2012) stated, writing is a social activity that requires the use of social modes. Skype, as opposed to other social networking tools, has the greatest potential for positive change because it is free, has a variety of tools that allows for multiple teaching modes, and is easy to use. The potential implications for this study are that online instructors may help to enhance the writing of online, underprepared students with poor writing skills by scaffolding learning using Skype to create informal

meaningful learning connections that will enable students to become independent and confident.

In Chapter 1 I introduced the scope of the study, and included a summary of 5 years of research relating to Skype current at the time of the study, a justification for the purpose, and an explanation of the problem and research questions. Each section contains detailed information relevant to the study and research problem. This chapter concludes with a summary of other chapters.

Background

The purpose of this case study was to explore the perceptions of instructors and students about the effectiveness of Skype as a scaffolding tool for increasing academic achievement for underprepared students in online remedial English composition courses through interactions with their instructor. Gabriel (2012) purported that conventional literacy alone is not adequate, unless it is expanded upon by the ability to acquire knowledge and to communicate with a wider range of print and electronic media. Consequently, the specific goal was to determine if Skype could be an effective tool for instructors to provide scaffolding to underprepared students for the acquisition of English composition skills. Few studies have explored the perceptions of teachers and students about the impact of Skype and similar collaborative Web 2.0 technologies on student achievement in online asynchronous learning institutions.

Strang (2012) conducted a study on Skype in an online business mathematics course and found that students who participated in Skype-led discussions obtained a statistically higher final grade than those in the control group. Strang's limitations were

that the sample size of 81 participants only included business students and that the study was on quantitative reasoning, which means the results did not generalize to nonmath oriented courses. This study focused on the improvement of prepared students, who because of their level and advanced course had already demonstrated academic success. Strang's study did not show if Skype could be used to support and improve the learning and proficiency of underprepared first year online college students.

Chou (2012) directed a pilot study in a college course to determine if Skype, along with other Web 2.0 technologies, could be used to support online collaborative learning. Chou determined that Facebook, Podcasting, Skype, Blogging, and Wikis improved student learning in online discussions. He suggested further research was needed to apply the instructional strategies into different learning environments. Chou's pilot study did not fill the gap of using Skype interactions to scaffold learning because it centered on doctoral level students and did not provide in-depth analysis of any of the social collaborative tools, but grouped them all into one analysis.

Parker, Boase-Jelinek, and Herrington (2011) led a qualitative study to investigate how synchronous group chat within Skype was used in a graduate level course for preservice teachers, how students responded to it, and to what extent it led to a development of community learning. Few participants of this study used chat for addressing immediate problems and for facilitating group projects and majority did not use chat at all for reasons that were not established in the study. Suggestions for future research included an in-depth content analysis of communication tool. This study did not focus on building instructor-student relations, nor does it add to the knowledge of

whether or not Skype is acceptable by low-achieving students to help improve their learning.

Macharaschwili and Coggin (2013) used Skype in a group of doctoral students who met face-to-face in a classroom. Skype was integrated to connect students who were absent to the classroom discussions. The study focused on interactions and opportunities for scaffolding between the host student and the Skype student, between other students and the Skype student, and between the instructor and the Skype student. They found that Skype could be effectively used to connect distant learners to face-to-face classrooms. Although the study was grounded in Siemens's connectivism theory and Vygotsky's scaffolding theory, it did not aim at using Skype to improve the learning of underprepared students.

Cohen and Burkhardt (2010) designed and implemented a synchronous librarian reference service using Skype to teach literacy information to college students. They conducted group sessions and a one one-on-one session with a student who needed additional guidance. They found Skype to be convenient for delivering information literacy instruction to groups of distance students. They did not examine if students perceived any growth as a result of Skyped sessions.

Although the aforementioned studies added insight to Skype's potential effectiveness at improving the quality of learning, none of the studies addressed the needs of underprepared students. Because underprepared students pose challenges for online instructors and are less likely to succeed, a case study was needed to provide a qualitative context on the effectiveness of scaffolding and Skype to make meaningful connections

and to provide opportunities for growth. Additionally, this study was needed because it combined traditional and contemporary theories with students and instructors' perceptions of the use of a common social free tool to help improve the quality of learning for underprepared students.

Cunningham, Fagersten, and Holmsten (2010) asserted that while synchrony is a growing need for online teaching and learning, the pedagogy needs to be the center, but the technology should be well thought out and explored prior to its use. An exploratory case study of online instructors who use Skype as a scaffolding tool to create learning interactions with their underprepared students may help to close the gap on what is currently known about synchronizing learning for online underprepared students. Additionally, such study may help to increase what is currently known of the potential of Skype interactions to affect underprepared students' acquisition of writing skills.

Problem Statement

Cunningham et al. (2010) reported that many underprepared students enroll in college, yet end up dropping out because they lack sufficient reading, writing, and math skills to continue. They argued that the use of synchronous tools is a growing need for online teaching and learning. The College Board Advocacy & Policy Center (2011) concurred and further stated that online learning institutions must find effective methods to improve the skills of underprepared students in order to decrease attrition. The attrition rate for undergraduate online students is estimated 10 to 20% higher than for traditional classes (Angelino & Natvig, 2009). According to Revere and Kovach (2011), "online enrollment doubled from 2002 to 2007 to 3.94 million" (p. 119). Vasavada and Wiley

(2011) stated that poorly prepared students continue to enroll in online universities but quit within their first year, leaving online universities with a reputation for high dropout rates. The College Board Advocacy & Policy Center (2011) suggested that the curriculum of first-year sequence courses be engaging and relevant to help address students' skill deficiencies. For traditional universities, social engagement means participation in campus activities, as well as communication and collaboration with peers, but for online universities engagement may mean limited interaction with faculty and classmates (Bach, Haynes & Smith, 2007). Furthermore, Bach et al. suggested the use of synchronous traditional teaching modes, such as scaffolding and tutoring because they enable students to interact with their instructor and develop interpersonal skills, which help to increase student retention.

Grimes and David (2012) and Murphy (2010) encouraged an analysis of students' perceptions of the use of synchronous communication tools to affect student-instructor interactions and student writing. They found that conventional remedial and developmental practices are weak because they are overly disciplined and skill-driven. Their exploratory research did not include any measures to improve remedial courses for online writing courses. Murphy's quantitative investigation indicated that students improve from computer-mediated elaborative feedback by negotiating meaning from the feedback with peers through exploratory talk. Although Murphy's method showed student improvement and some evidence of peer-scaffolding, it did not inform on the relevance of student-instructor scaffolding, nor was the particular computer program mentioned.

Students' perception of their writing, as a result of interacting with their instructor via Skype or other communication tools may provide a strategy to help universities meet the needs of underprepared freshmen. Rapport is positively correlated with student achievement (Mongillo & Wilder, 2012). Murphy and Rodriquez-Manzanares (2012) and Cao, Griffen, and Bai (2009) found that students are satisfied and demonstrate improvement when instructors interact with them using real-time communication tools. Neither study mentioned a particular communication tool. This current study expanded upon the previously mentioned study because it used Siemen's connectivism theory in a qualitative analysis of instructors and students' perceptions of student skill improvement as a result of student-instructor Skype interactions.

An analysis of instructor and student perceptions of the effectiveness of Skype to scaffold writing development extended two studies (Huang & Hsiao, 2012; Kno and Boswell, 2011), which found that synchronous tools improve skill levels and that instructors and students find value and importance in using the tools. Cheng (2010) found that synchronous environments have a negative effect on student discussions. He concluded that online discussion forums are more effective and facilitated the scaffolding of students' understanding because they provide opportunities for students to ask questions and take time to think about the discussions prior to engaging. This study challenged Cheng's finding because it shows how Skype can be leveraged to allow students to ask the questions they feel most relevantly focused on their need.

Researchers have revealed the effectiveness of Skype and other Web 2.0 technologies in disciplines such as business, psychology, and nursing, few studies have

been conducted on the use of Skype to improve student success (Cho, 2012; Macharaschwili & Coggin, 2013; Murphy & Rodriquez-Manzanares, 2012; Parker, Boase-Jelinek, & Herrington, 2011; and Strang, 2012). None of these studies focused on using Skype to improve the writing proficiency of first year underprepared students in a remedial online course. Because Skype is an inexpensive tool that allows for instant messaging, screen sharing, and video calling, an exploration of students and instructors' perception on its effectiveness to increase student achievement was warranted. This study addressed the perceptions of instructors and students on the impact of communications using Skype on the learning of underprepared college students in an online English composition course. It adds new knowledge to the field of educational technology, to online course designers of online universities, directors of academic affairs of online institutions of higher education, and to online instructors.

Purpose of Study

The purpose of this case study was to explore the perceptions of instructors and students about the effectiveness of Skype as a scaffolding tool for increasing academic achievement for underprepared students in online remedial English composition courses through interactions with their instructor. The effect of interactions between instructors and students using Skype on the acquisition of writing skills of underprepared students was the phenomenon of interest. Although this study did not measure students' writing to access Skype's potential, it explored instructors and students' perceptions of how Skype interactions had an impact on their writing skills.

Research Questions

1. How do students perceive changes in their writing based on Skype interactions with their instructor?
2. How do instructors perceive changes in the writing of remedial students based on Skype interactions with students?
3. What are the perceptions of the instructors about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?
4. What are the perceptions of students about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?

Conceptual Framework

This study was grounded in the conceptual frameworks of Siemens's (2006) connectivism theory, Bruner's (1960, 1996) cultural-psychological theory, and Vygotsky's (1978, 1987) social constructivist interaction theory. Siemens's connectivism theory provided a lens for understanding all of the research questions. Skype can be seen as a network system for building informal relationships and connections in which knowledge changes through development and use (2006). Bruner's (1960, 1996) cultural-psychological theory was used because it contented that verbal scaffolding is needed to support writing and was applicable to each of the four research questions. Vygotsky's (1978, 1987) social constructivist theory was important to this

study because it provided insight to what he meant by the zone of proximal development, which supported the first two research questions.

Siemens's (2006) theory was developed to understand the connections formed in digital learning, and was used to address all four questions. The sixth connectivism principle was of particular interest to this study because it states the "ability to see connections between fields, ideas, and concepts is a core skill" (2005, para 24). Siemens argued that parts or fragments of information must be combined to create the whole through computer networks and social networks. His theory centers on the idea that since students are continually exposed to new information, they will acquire knowledge and learn new skills because their decisions will result from foundations of change. Siemens (2006) stated that students must distinguish informational priority and determine how new data changes criteria for previously made decisions.

Bruner's (1960) cultural-psychological theory on scaffolding applied to each of the four research questions because scaffolding provides support for learner attention, motivates students, identifies relevant task, controls for frustration, and advocates for "self" construction. Bruner's framework was also important because it contended that a technical-social culture and community should be organized to create a shared meaning that is symbolic and influences learning. Bruner asserted that a culture is needed to help learners become self-reliant and have good judgment and the learning must enable learners to negotiate meaning. He argued that an effective culture to construct learning is one that includes an interactive environment, scaffolds novices, and provides a good context for teaching. Such an environment is conducive to learning because it creates an

"exchange of understanding between learner and teacher to find in the intuition of the child, the roots of systematic knowledge" (Bruner, 1996, p. 22) so that meaning can be negotiated when words and ideas go astray. Bruner's framework applied to each of the four research questions.

Vygotsky's (1978) social constructivist framework helped to interpret the results for research questions one and two because it provided an understanding of how interpersonal processes, referred to as Skype interactions in this study, shaped the perceived learning improvements. Vygotsky's zone of proximal development is an extension of Bruner's scaffolding theory because it advocates for an environment in which learners can learn from others who are more sophisticated in the intellectual disciplines that assist learning. Vygotsky's later work put more emphasis on learning environments that stimulated growth through the use of interpersonal processes which he believed necessary for fostering instrumental collaborative efforts. He argued that socialization relied on social modes to employ effective ways for learners and educators to create student-centered environments that enabled learners to construct meaning. He explained that the learning process for learners is best internalized through outside forces that stimulate the core of their thought process and allows opportunities for growth. He argued, "What the child is able to do in collaboration today he will be able to do independently tomorrow" (1986, p. 211). Learning, he believed could be achieved from other learners, teachers, parents, and tools as long as the environment is conducive to the learner's needs.

Nature of Study

This was a qualitative case study of one college's use of Skype as a tool for instructor and student communication in a remedial online English composition course. Yin (2014) described a case study as a research method in which the essential research questions are "how" or "why," where the researcher has no control over the events or behavior being studied, and the focus is on a contemporary phenomenon in its real-world context. This case study evolved from a need for understanding how one-on-one Skype interactions between students and instructor can have an impact on student learning for underprepared college students. The key components of this case study were to examine how students perceived changes in their writing resulting from Skype interactions with their instructors; and how instructors' perceived the effectiveness of Skype communications with underprepared students in improving their writing skills.

I was the sole, primary data collector. Data collection was triangulated through three sources of data: (a) instructor interviews, (b) student interviews, and (c) recorded Skype conversations between teachers and students. *ATLAS-si5* was downloaded to help organize, look for themes, confirm data, and to allow for accuracy. *Skype mp3 recorder* was also downloaded to explore its effectiveness for use in the study and was later used to record the Skype interviews with student participants. A convergence of sources added to the credibility of this case (Yin, 2014).

Definitions

ACT: ACT Writing Component (2009) defined ACT (American College Testing) as "a multiple choice assessment that measures students' college readiness in four skill

areas: English, reading, mathematics, and science. An optional writing component assesses students' skill in planning and writing a short essay" (para. 2).

Blended: Stewart, Harlow and Debacco (2011) defined blended instruction as "learning environments that support both synchronous and asynchronous interactions" (p. 1).

Computer-mediated communication: Sims, Har, and Luan (2010) defined Computer-mediated communication as "communication that takes place between human beings via the instrumentality of computers" (p. 4).

Connectivism: Connectivism is the use of networks to co-create knowledge. Three principles of connectivism that relate to this study: learning that is found in technological tools, "nurturing and maintaining connections to facilitate continual learning, and the ability to make connections between fields, ideas, and concepts is a core skill" (Siemens, 2006, p. 15).

Constructivist-based learning environments: "Constructivist-based learning environments are settings that reflect the conversational paradigm and emphasize collaborative effort in the knowledge building process" (Lim, 2010, p. 1).

Elluminate Live: "A synchronous communication tool developed by Elluminate Inc. that integrates various virtual resources in order to facilitate online training through video, chat, audio, session recordings, and survey presentations" (Santovenia, 2010, p. 4).

Information literacy: "A set of information literacy abilities requires individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the information needed" (Nicholson & Eva, 2011, p. 2).

Quality online learning: This is a complex mixture of physical and social technologies, applications, activities, and presentation designed to teach, combined with a suite of services that help support the entire learning experience (Parker, Boak-Jelink, & Herrington, 2011).

Real-time: "Communications through applications in which the computer must respond as rapidly as required by the user or necessitated by the process being controlled" (Parker, et al., 2011, p. 8). It includes activities or events that happen at the same time or synchronously.

Scaffolding: Scaffolding means combining practice and conceptual explanation in an environment that allows for the exchange of demonstrating, modeling, imitating, discussing, collaborating, reflecting, and repeated action by which the learner is able to construct meaning by taking on participatory, proactive, and communal roles rather than being passive recipients (Bruner, 1996). In its simplest form, it is interactional support that mediates students learning (Simons and Klein, 2007).

Skype: "A telecommunication software application that allows users to make voice and video calls, send and receive instant messages, and share files. It is free downloadable software, with an option to upgrade to an advanced, paid version" (Skype.com, para. 1).

Synchronous learning in distributed environment: "Learning occurs through conversations among students and faculty when they create knowledge together, in real-time, without physically being together in the same place (Stewart, Harlow, & Debacco, 2011, p. 2).

Synchronous online communication: "Communication parties are present at the same time for an event; it involves dialog, activity, or event in a real-time mode through the use of applications or services such as VOIP, desktop video conferencing, and Internet Relay Chat (IRC)" (Stewart, Harlow, & Debacco, 2011, p. 3)).

Telecollaboration: "A sociocultural view of language learning where learning takes place in social contexts, such as online, through interaction and collaboration" (Guth &Helm, 2011, p. 1).

*Underprepared students: S*tudents who demonstrate deficiency in reading, writing, and math are underprepared students. The National Survey of Student Engagement (NSSE) identified these students as having taken two remedial or developmental classes (2009).

Video conferencing: "Interactive and synchronous voice, video and data transfer conducted between two or more points via communication lines is video conferencing" (Karal, 2011, p. 2).

Assumptions

Assumptions are what a researcher accepts as truths about a context. They are the multiple and dynamic realities of a context or the belief that dynamic realities are contextual (Creswell, 2003). Denzin (1994) explained assumptions as a set of basic beliefs that must be accepted on faith because there is no way to establish their truthfulness. Yin (2014) pointed out that meaning is embedded in each participant's experience; therefore, it was assumed that participants truthfully reported their

experiences concerning the study. Additionally, this study was based on the following assumptions:

1. The process of qualitative case study is inductive in that it builds abstracts, theories, and concepts from detail rather than test existing theory (Yin, 2011).
2. Results are value-laden and may be biased due to the humanistic nature of the case study (Creswell, 2003).
3. Observations provide immediacy and insight into interpersonal behaviors (Yin, 2011).
4. Recorded sessions represent a more accurate depiction of student/teacher interactions (Yin, 2011).
5. Participants will find Skype easy to use.
6. Students may base their perceptions solely on the pedagogy and not on Skype.
7. Reality is subjective and multiple as seen by the participants (Creswell, 2003).

Scope and Delimitations

Two instructors delivered remedial English composition instruction and skills remotely using Skype and email. Instructors taught an online remedial English composition class for a locally based southeastern ground campus and used Skype as a supplement for their instruction. Each instructor used Skype to communicate with her online students throughout the six-week course. However, this study focused on Skype interactions between each instructor and only three of her students.

Purposive sampling identified the students and instructors as meeting the criteria for this inquiry. Student participants were adult learners whose scores on the college

entrance exam, American College Testing (ACT) were below sufficient in reading, writing, or math. Both instructors had a substantial amount of experience facilitating and teaching distant and local students and had used Skype for 2 years with remote learners.

Transferability of the findings of this case study may inform educational policies and practices of online university systems and future research regarding the use of social media tools in education. This study may provide insight to online instructors who want to provide one-on-one instruction to students. Knowledge from this study may also inspire the conduction of pilot studies on the use of synchronous tools to improve learning and increase retention rate of struggling online students.

Limitations

The fact that this study was a qualitative case study was the most significant limitation. Yin (2014) warned against the use of a case study because case studies are not generalizable and are seldom transferable. He suggested that researchers report information and not extrapolate probabilities. Yin warned against using traditional narrative case studies and advised that they also include rich descriptors of the setting, participants, methods, instruments, and procedures to accurately capture the true voices and experiences of the participants. To control for this limitation, a well-described narrative was written, which included quoted material from participants, as well as descriptive segments of the Skype transcripts. In addition, the results were explained to be useful to online higher institutions of education.

A second limitation of this study was the selection process. Participants in this study had to meet several criteria. Student participants had to be enrolled in an online

remedial English composition class, which meant they had to have been initially identified by the university as underprepared. Secondly, students could only participate if their instructor was selected to be in the study. Instructor participants were selected if they taught an online remedial English composition class in the said term and if they used Skype regularly, as suggested and encouraged by the university, at least twice in a six-week course. To compensate for the selection limitation, invitations were sent to all online instructors teaching English composition and all students enrolled in the instructors' classes were invited. However, due to time constraints, the first two instructors to respond were invited and the first three students for each instructor to respond favorably were also invited.

A third limitation was the small group size. Only six students and two instructors participated in this study. Each instructor's online class consisted of 19 to 22 students, but only three students per instructor chose to participate. To compensate for the small number of participants, eight interviews were conducted. Yin (2014) asserted that interviews should be targeted and insightful, but warned that they can result in bias from poorly articulated questions and reflexivity and inaccuracies due to poor recall. He suggested that interviews consist of the line of inquiry of the case study's protocol and that they include conversational inquiry. Furthermore, Yin advised that interviews be recorded and listened to carefully to eliminate bias and inaccuracies, but only if informants give permission for recordings. This study followed the advice of Yin by incorporating the use of permissioned recordings and carefully planned interview

questions and interview protocol. Additionally, the interview questions were constructed with the help of expert practitioners from my committee.

A fourth limitation is that this study did not examine documents or employ archival records of its participants, such as test scores and writing samples. The online institution administered a college entrance exam to determine students' college readiness. Although the scores were not necessary to confirm the participants, they may have been stable and precise for helping to interpret the results. Yin (2014) pointed out that documents are unobtrusive and can be reviewed repeatedly, archival records are stable and precise, and observations provide immediacy and insight into interpersonal behaviors. To address the limitation, this study used audio recordings from Skype mp3 recorder software to ascertain the nature of the actual use of Skype between students and instructor and to gain insight of Skype's technical operations. This design used 12 Skype session recordings, two from each student.

A fifth limitation was the length of the course term, which impacted the frequency of the Skype sessions. The institution defined the short term as a "minisession" because it was 6 weeks, as opposed to its normal 12-week course load. Instructors were required to have only two Skype sessions with students rather than four for 12-week courses. To control for this limitation, I met with instructors before the classes began to ensure that recording software was installed on their computers and working properly and that instructors used a backup recording device to avoid missing important data.

The sixth limitation of this study was data sources. Because only six students and two instructors were used, the data might have been scarce. To control for this limitation,

student interviews, instructor interviews, and transcripts from the Skype sessions were used to triangulate data, which were coded and organized to help reveal themes. To ensure accuracy, transcripts of Skype recorded sessions were listened to repeatedly and transcribed at least three independent times. Interview questions were carefully created with the consensus of expert researchers and interviews were planned carefully.

A case study by nature inherently includes many limitations. Other limitations included a reflection of my own bias, interpretations, and unorganized data, and the fact that I am a novice researcher. A research journal was used to write down my thoughts and biases, which helped to separate my biases from what was actually happening in the case study. This allowed for a more truthful interpretation. A student researcher must listen to the advice of expert researchers carefully and read as much as possible about the type of study he or she will conduct. New researchers must be efficient in conducting and managing data and not be hasty. My committee chair showed me how to look for themes and to code data. I used her advice and that of Yin (2014) to act on data as soon as they came in, and to organize and to store them safely.

Significance

This case study contributes new knowledge to the field of educational technology because little research has been conducted on Skype as a tool for communicating between instructors and students to improve attainment of skills and competencies in education, especially regarding underprepared students. The few published studies found during this study that used Skype for instructional purposes (Chou, 2012; Cohen & Burkhardt, 2010; Grimes & David, 2012; Macharaschwili & Coggin, 2013; Parker, Boase-Jelinke, &

Herrington, 2011; Strang, 2012) focused on graduate students, online business mathematic students, doctoral students, and on pilot studies conducted on media specialists who used Skype to deliver information literacy instruction to overseas students. Many studies have investigated the effectiveness of Skype on the mediation of language learning (Ryobe, 2009; Yang & Chang, 2008; Yanguas, 2010). However, there is limited documented information about the impact of Skype on underprepared remedial online college students when engaged in Skype discussions with their instructor for the duration of the course. This study may broaden the knowledge of course designers for online universities in terms of instructor and student collaboration, which may lead to the implementation of Skype as a more frequently used tool for online courses. Secondly, a case study may provide online instructors a base of knowledge to use Skype as a scaffolding tool with underprepared students, which would have a positive impact on learning. Furthermore, this study has the possibility to affect positive social change because it may reveal how Skype can be used to build interpersonal relationships between instructors and students, thereby making learning more obtainable, particularly for the underprepared students entering college. A case study on the use of Skype to interact with online students may possibly influence higher learning education programs to require faculty to use it to hold virtual office hours.

Summary

The popularity and convenience of online learning institutions has made education equitable to all. Consequently, many underprepared students enroll and end up dropping out within their first year because they lack sufficient reading, writing, and

math skills. The College Board Advocacy & Policy Center (2011) suggested colleges find effective methods of improving the learning of underprepared students. Skype is used to connect people in remote locations. It is commonly used in businesses, hospitals, and simply for communicating with dislocated family members. Aside from a few librarians using Skype as a pilot to teach research skills, many studies exist of Skype being used to teach a second language. There is a gap in knowledge of Skype being used to create student/instructor interactions that may help to improve student writing. In addition to the problem and purpose, Chapter 1 included a discussion on the background of the study, nature of the study, research questions, and summarized literature relating to the scope, limitations, and assumptions.

Chapter 2 consists of a synthesis of current research on Skype, synchronous tools, and underprepared students within the last 5 years. The literature search was explained to enable future researchers the ease of continuing this study. Studies were discussed in relevance to the research questions. The frameworks of Siemens, Vygotsky, and Bruner were discussed to provide a basis for the study. Best practices for improving student achievement were also discussed in relation to the research questions. To make up for the lack of studies found specifically on Skype, studies on synchronous learning tools were included and summarized. The remainder of the extensive literature review highlighted uses of Skype in various settings. The chapter ends with a discussion in the gap of literature. Chapter 3 begins by explaining the research design, the rationale for the design, and the methods; methods and procedures were detailed to allow for easy replication. Chapter 4 contains a comprehensive synthesis and analysis of participants'

interviews and audio recordings. In Chapter 5 I include the purpose and implications of the findings, which are organized within the conceptual framework. Recommendations for further research and implications for social change are discussed with a review of current research relating to using Skype or similar synchronous tools to interact with students to increase student achievement in online learning environments.

Chapter 2: Literature Review

The problem is that underprepared online students struggle with basic writing skills. The purpose of this case study was to explore the perceptions of instructors and students about the effectiveness of Skype as a scaffolding tool for increasing academic achievement for underprepared college students in an online remedial English composition course through their interactions with the instructor. Murphy (2010) and Kno and Boswell (2011) discovered an increase in enrollment of underprepared students into online institutions of higher education. Cheng (2010) found that synchronous learning is useless without focus and scaffolding. Chou's (2012) pilot study on doctoral level students supported positive outcomes of Skype and other collaborative tools on student learning. Parker, Boase-Jelinek, and Herrington 's (2011) qualitative investigation revealed how the synchronous chat feature of Skype increased graduate student learning. Not only did this study add to the scarce number of studies conducted on Skype, it added another dimension that had not been found in current research; it explored the use of Skype interactions between instructor and their at-risk students.

In the introduction of this chapter I discussed the problem and explained the purpose of this study. Remaining sections consist of a synthesis of current research on Skype, synchronous tools, and underprepared students within the last 5 years. First, the literature search is explained so that other researchers can continue this study. Articles and studies are discussed in relevance to the research questions. Explanations of Siemens's (2006), Vygotsky's (1978), and Bruner's (1960) theories are discussed to provide a basis for the study. Best practices for improving student achievement are

discussed in relation to the research questions. To make up for the lack of studies found specifically on Skype, studies on synchronous learning tools are summarized. The remainder of the extensive literature review highlights uses of Skype in various settings. The chapter concludes with a discussion in the gap of literature.

Literature Search Strategy

The search for Skype studies was difficult because there were not enough to fulfill the requirement. Therefore, the researcher had to expand by researching tools that were similar to Skype, such as Adobe Acrobat Connect, WebCT, Elluminate Live, Chat, Yahoo, Messenger. Search engines included those found in the Walden Library Database: EBSCOhost, Academic Search Premiere, ERIC, and ProQuest. Outside databases included a paid membership database called Questia and a free database, Google Scholar. Several free online journals were found, such as *THE Journal, American Educational Research Journal,* and *the International Review of Research in Open and Distance Learning* Peer-reviewed articles dated within the past 5 years were used. The initial basic search criteria consisted of *online learning, issues of online learning, synchronous tools, Skype, Voice-over-protocol, scaffolding, underprepared students, remedial writing, and student/teacher interactions, student perceptions, instructor perceptions, connectivism, social learning, teaching writing, learning writing, pedagogy, student achievement, struggling learners, first-year learners,* and *videoconference.*

Online learning yielded over 8 million results, but once stringed with other terms, such as *synchronous tools* and *student/teacher interactions,* results decreased to

approximately 2,745 hits. The string, *Skype, online underprepared college students, student/teacher interactions* narrowed significantly to 18 studies, but one important term emerged, *tutoring*. When *voice-over-protocol* was inserted in place of *Skype,* results broadened and led to other relevant terms such as *tutoring, Web 2.0,* and *conference calls*. *Synchronous learning tools, online students, writing skills* revealed other relevant terms such as *Elluminate Live, Blackboard Collaborate, WebCat, Instant Messaging,* but results were over a thousand. Substituting and replacing terms created a multitude of search strings, but at least 60 were found to meet the research criteria: relevance, current, and peer-reviewed. Other search terms consisted of the following: *Synchronous computer-assisted, computer-mediated communication, computer-assisted language learning, second language learning, online collaboration tools, computer uses in adult education, educational technology, communicating with online students, multimedia tools, composition pedagogy, instant messaging, video chat, teleconference, video technology, learning modalities, multisensory learning, andragogy, learning through social media, multimedia tools for online teaching, Web 2.0 tools in online classrooms, motivational learning tools, collaborative learning tools, one-on-one feedback, Skype mediated communication, virtual learning, remote learning, adult remediation strategies,* and *adult learners.*

Framework

Skype has no impact on learning, if viewed from Tamin, Bernard, Borokhovaski, Abrami, and Schmid (2011) quote of Clark's (1983) seemingly pessimistic perception that "Media have no more effect on learning than a grocery truck has on the nutritional

value of the produce it brings" (p. 5). Due to the debate over his famous quote, Clark expounded that instructional design and pedagogy determine the value of an educational experience (Tamin et al.). The purpose of this study was to explore the perceptions of students and instructors about their Skype interactions to scaffold the writing of underprepared college students enrolled in an online remedial English composition course. As found in Tamin et al., from an optimistic, futuristic standpoint, many contemporary theorists such as Kozma (1994) and Dede (1996) postulated that computers allow processes that can directly impact teaching and learning.

Social constructivism, cultural-psychological theory, and connectivism are the three frameworks that provided the contextual background for this study Social constructivism (Vygotsky, 1978) centers on human development from a sociocultural perspective through interpersonal processes that lead to higher mental processes by means of connecting a learner with another who has higher or more advanced knowledge, hence zone of proximal development. Bruner's (1960, 1996) cultural-psychological theory emphasizes the impact of an interactive culture that cultivates the construction of constructive environments through demonstrating, modeling, imitating, and by enabling learners opportunities to reflect, discuss, and challenge their own learning process. Connectivism (Siemens, 2006) involves a sociotechnical frame in which social constructivist activities occur; it focuses on how digital networks support new forms of connections and social relations. Siemens pointed out that the emergence of social tools permit rapid exchange of knowledge and high levels of dialogue, which results in connective knowledge. Similar to Vygotsky and Bruner's theories, Siemens argued that

although end-users have more access and control in the digital age, experts still play a valuable role and are needed as a source of guidance in the construction of shared knowledge.

Siemens (2006) posited that knowledge is no longer a product, but a process that is being continuously updated. Attention to the application of knowledge can only be achieved by integrating knowledge in contexts of use. Using the metaphor of the caterpillar transforming into a butterfly, Siemens explained that knowledge is transitory in that it changes internally through development and use. When knowledge is experienced in application, the theoretical understanding of knowledge is left behind. Similarly, Bruner (1960) argued that learning is an active process from synthesized information and experiences, which includes informed decision-making, generalized hypotheses, and constructed meaning.

Knowledge is repackaged, which Siemens (2006) defined as the personalization of the knowledge created and gained from others. Integrating and connecting technology illuminate an understanding of knowledge not easily understood. Connectedness allows learners to create and distribute their own materials and identity, and to see the pieces that comprise the whole, enabling the creation of a whole that suits needs and interests.

Immediacy changes the environment in which knowledge exists. Individuals must develop skills to differentiate and choose what is important and store information that is needed in order to make decisions based on current knowledge. Therefore, in order for students to grasp new knowledge, interpretation and decision-making must happen at the same speed and force as the flow of knowledge (Siemens, 2006). The

pedagogical techniques found in this study addressed immediate concerns and writing issues of students and enabled them to extend and apply new skills and knowledge that were relevant to them at the time.

Bruner (1960) stressed that structure is the key to teaching. He explained, "Structure is relationships among factual elements and techniques" (p. 10), and therefore, contended that knowledge content can be structured on any level that allows the student to easily comprehend it. Bruner also promoted tropism, which is movement in response to stimulus. Regarding education, he explained that students make relevant connections in structured environments that support and motivate. Analogous to Bruner, Siemens (2006) postulated that ecologies and networks provide solutions to the necessary structures and spaces in which the flow of knowledge can be accommodated and facilitated. Content begins the knowledge cycle, context makes it meaningful, and conduit makes knowledge relevant, current, and available. Siemens (2006) argued that in order for content to be diverse and multi-faceted, the learning ecologies must consist of the following components: "informal, unstructured, tool-rich, consistency, trust, simplicity, decentralized fostered connection, and high tolerance for experimentation and failure" (pp. 86-87).

Conversations develop reality, connectedness affords socialization, and technology enables individuals to make connections through shared conversations that lead to deeper socialization (Bruner, 1996; Siemens, 2006). Sociotechnology networks change the traditional role of the teacher because they allow students to have control (Siemens, 2005). The flow of information is both ways and the student's ideas are as

important as the teacher (Bruner, 1996). Sociotechnology networks provides students with tools to construct knowledge first hand, from experts, researchers, and theorists (Bruner, 1996) through tools such as Skype, Twitter, blogs, Facebook, listservs, among others (Siemens, 2010).

Siemens (2006) argued that educators must now influence and shape a network rather than control a classroom. He posited that educators play seven roles in networked learning environments: amplifying, curating, wayfinding, aggregating, filtering, modeling, and persistent presence. Students are more likely to see material that is amplified by the teacher. An educator may, for example, amplify an article link on Twitter by using a feature called *re-tweet.* He explained, "A curatorial educator allows learner autonomy by creating space in which knowledge can be extracted, explored, and connected" (p. 88). In 2010, Siemens argued that educators must help students to "wayfind" or make sense of fragmented information from social networks by filtering and drawing attention to relevant topics. Educators should aggregate by revealing content and conversation structure, as opposed to defining it first. Another role of an educator is to filter resources that are important for learning. The teacher must also model activities that are not easily understood by lecture and activities. Lastly, persistent presence was described as a point of existence online in which educators can express themselves and be discovered in order to connect with learners.

Research questions one and two focused on students and instructors' perceptions of Skype interactions. Vygotsky's zone of sociocultural theory helped to inspire the two questions because it focused on improving interpersonal processes through interacting

with others who have a higher understanding. Bruner's cultural-psychological theory of culture and scaffolding provided an understanding of the results for the first two research questions because it also focused on the importance of interactive learning and because the study used scaffolding strategies for novice, remedial writers. Research question two was also supported by Siemens's connectivism theory. Siemens's points of technology enabled interactions, student control, educator's seven roles, and persistent presence helped provide a conceptual understanding of the instructors how the instructors' perception impacted their students' writing.

Research questions three and four pertained to students and instructor's perception of the effectiveness of Skype to scaffold the learning of English composition. Bruner's argument that students make relevant connections in environments that support and motivate provides support for the two questions. Skype sessions were intended to serve as a conduit to support and motivate student learning. Siemens (2006) argued that the flow of knowledge can be accommodated and facilitated through technological networks. Siemens's seven roles of an educator: aggregating, amplifying, curating, filtering, wayfinding, modeling, and persistent presence can be applied to the Skype scaffolding interactions.

Sociocultural. Murphy's (2010) study supported Vygotsky's sociocultural theory because it found that students negotiated meaning by engaging in exploratory talk with their partners, which is a form of zone of proximal development. Lim (2010) directly stated that his study was based on sociocultural constructivists. However, he advocated that scaffolding enables the adoption of constructed knowledge. His goal was to examine

the scaffolding and knowledge appropriations among online collaborative cohort discussions. To achieve his goal, Lim evaluated how the chat tutorial fostered collaborative learning processes using peer scaffolding.

Cultural-psychological. Casal's (2012) qualitative study supported Bruner's theory of learning because it focused on pedagogical strategies that are effective for using synchronous communication for the process of learning and teaching of language studies. Her results revealed the importance of student-teacher interactions to strengthen the participation of students. Although not directly stated, Devers (2011) used a form of scaffolding in his study; students reported that the professor provided supportive dialogue during the chat sessions and that he responded to every student. Lim's (2010) study revealed that chat technology could enable peer scaffolding.

Connectivism. Murphy and Rodriguez-Manzanares's (2012) study supported Siemens's Connectivism theory because it advocated the need for rapport building in distance education courses. According to their study, rapport was demonstrated as online teachers provided immediate, constructive feedback to students, showed concern of students' progress, personalized learning, and was available for immediate responsiveness to students' needs. The researchers discovered the challenges of building rapport without the use of synchronous tools. They found that non text-based interactions, such as hearing, seeing, and interacting in real-time, face-to-face to be more successful at helping online teachers build rapport with students. Devers (2011) study, on student/instructor interactions also supports connectivism. Tucker and Neely (2010) supports connectivism because it evaluated the effectiveness of using web conferencing,

particularly Adobe Connect, to support the Socratic Method of improving the learning of business concepts of online at-risk business students. Dunaway (2011) conducted a conceptual theory to explore how connectivism provides a framework for understanding how students learn information literacy.

Best Practices for Improving Student Achievement

Ciekanski and Chanier's research (2008) was integral to this study because it was one of a few that particularly focused on teaching the writing process in an online synchronous environment, which indirectly relates to three other elements of the current study: Skype, scaffolding, and remedial freshmen writing. Tutors and students met over a 10- week period for eight sessions that lasted about an hour and a half each. The aim of the course was to develop vocational English and competencies in a group of students who were less proficient in writing and speaking English (referred to as false learners by Ciekanski and Chanier) and had not practiced English between 15 to 30 years in a multimodal environment. This group was typical of the nontraditional students enrolling in online universities. The platform used in this study was *Lyceum*, which enabled learners to "connect and communicate orally in real time, participate in text/chat, and read/modify simultaneously textual or graphic produced work" (p. 7).

Ciekanski and Chanier (2008) found that even when students are involved in the writing process, they perform majority of the steps orally, discussing what and how to learn, rather than using the other modes for communicating. They also found that learners relied on the tools of Microsoft Word processing software in conjunction with other software applications, which meant they made changes to their writing while using

other tools. Learners chose to participate in multimodal discourse using synchronous tools. Learners used multimodal strategies (i.e., verbal and nonverbal communication) over monomodal strategies. A multimodal learning environment helped students focus on the writing process rather than the results because of its process-oriented nature. The researchers pointed out that the use of video would have been a distraction in this particular study because speech is related to various forms of writing. They also called for further research to be carried out in the area of writing in an online multimodal environment. Therefore, this current study on Skype helps to fill the gap because of its multimodes including video, audio, text/chat, and screen sharing.

According to Grimes and David (2012), in 1995 over half of first-time freshmen enrolled in undergraduate and associate institutions took at least one remedial course. Conventional remedial and developmental practices were reported to be too weak and discipline- or skill-driven to influence the needed transformation from at-risk to college success. Grimes and David pointed out that students who are enrolled in remedial reading or two or more remedial courses are unlikely to graduate unless they are exposed to different and comprehensive educational experiences, for they discovered that the graduation rate for underprepared students was only 2%. As a result, they argued that university leaders must create conditions that provide for student learning and personal development. Greener (2009) shared similar sentiments, purporting that online learners need the type of support, which will enable them to take control of their own learning.

Mongillo and Wilder (2012) argued that more reliable and systematic research is needed to inform and guide educators' intervention practices for at-risk, freshmen college

students. Their study cited 2011 statistics by the National Center for Education, which found that "36.2% of students entering United States colleges needed at least one developmental course and another 48% did not pass the college readiness benchmark" (p. 3). Mongillo and Wilder found that the use of online technologies heightened the need to comprehend and compose expository and descriptive writing, which were identified as needed skills.

New pedagogies surrounding communication technologies are needed because first-year university students possess different skills and needs from those of a traditional educational system (Gabriel, et al). Johnson, Archibald, and Tenebaum (2010) asserted that reading comprehension, critical thinking, and meta-cognitive skills are the three essential skills needed for college success, but many first-year students lack in these areas. They claimed that through appropriate interventions, underprepared students have a possibility of overcoming these deficiencies and becoming successful in post-secondary education. Johnson, et al. purported that the interventions need to be implemented within the first year of college for underprepared college students and need to focus on the development of basic skills necessary for reading comprehension, critical thinking, and meta-cognitive skills. Furthermore, Johnson et al. (2010) contended, "The intervention would require providing students with sufficient, effective, deliberate practice, and feedback, and must be multi-faceted, incorporating the latest learning technologies" (p. 16).

Dunaway (2011) discovered that the connectivism theory can provide a framework for understanding how students learn information literacy through networks.

She applied the connectivism theory because it involves the use of information technology to help determine its' usefulness in assessing students ability to use multiple resources to create knowledge. Although Dunaway's study was intended for librarians to help students gain information literacy skills, it was useful to the current study because the current study used Skype as a medium, along with other resources to help students develop writing skills.

Because American colleges and universities are comprised of students from different countries, curriculum designers recognize and address communication and writing deficiencies of nonnative-English-speaker students (Cheng, 2010). Cheng examined the impact of computer mediated communication (CMC) and Vygotsky's scaffolding theory on a cohort of graduate students who spoke English as a second language in a linguistic course. Cheng specifically defined scaffolding for his study to mean the "support for learning and problem solving related to academic writing through CMC" (p. 77). The asynchronous discussion forum was the means by which the teacher and students communicated. Cheng found that although the teacher provided support, overall students collaborated and engaged in bidirectional scaffolding as they helped each other find the right focus, understand how to interpret task requirements, understand how to use conventions, and understand how to use APA parenthetical citations and references.

Cheng (2010) concluded that online discussion forums scaffolded students' understanding because they provide opportunities for students to seek and provide clarifications. Students were able to ask peer questions, learn from peers' experiences,

and correct misunderstanding and malpractices in academic citation practices. He purported that an asynchronous environment is more conducive to helping non-native speakers develop academic writing skills because it has delayed production, which gives students time to internalize and process information. Additionally, computer-mediated discussion forums allowed second language students to have more opportunities to engage in meaningful dialogue with native speakers and non-native speaking students. A synchronous environment, Cheng argued, would have less effect on academic achievement because it is fast-paced, which means second language and non-native speaking students miss out on important information, and a synchronous setting would not require students to get involved with the immediate discourse community of their class. However, Cheng mentioned that scaffolding in other types of computer-mediated communication or online synchronous collaboration is worth an exploration because they will contribute to a deeper understanding of the impact of computer-mediated communication on academic literacy development.

Mongillo and Wilder (2012) postulated that the online technological communication mediums provide disenfranchised and disengaged students with the stimulation interaction and motivation they need particularly because these students are already proficient users of multiple technologies. Likewise, Murphy and Rodriguez-Manzanares (2012) advocated the need for rapport building in distance education courses. According to their study, rapport was demonstrated as online teachers provided immediate, constructive feedback to students, showed concern of students' progress, personalized learning, and was available for immediate responsiveness to students' needs.

The researchers discovered the challenges of building rapport without the use of synchronous tools. They found that non text-based interactions, such as hearing, seeing, and interacting in real-time, face-to-face to be more successful at helping online teachers build rapport with students.

Grimes and David (1999) argued that faculty's interaction and involvement had more of an impact on underprepared students than college-ready students. They found that some faculty expressed ambivalence towards helping underprepared students. Although instructors are skilled in a specific discipline, many do not have the skills and confidence to effectively address the needs of underprepared students. Greener (2009) supported Grimes and David's findings and reported that faculty set up barriers when they have a negative perception of technology usefulness, which makes online collaboration and learning ineffective.

In order to adequately prepare underprepared students, instructors must plan, create, and sustain a learning environment that is centered on the student. "A seamless system must be created by establishing partnerships, opening up channels of communication, and reducing obstacles" (Grimes & David, 1999, p. 2). Blackboard Collaborate and Adobe Connect are two popular synchronous systems that can help overcome the limitations involved with asynchronous distance education (Huang & Hsiao, 2012). The current study analyzed Skype as a medium for opening up communication channels between teachers and students to determine its effectiveness to alleviate the limitations of asynchronous learning environments

A 2009 study conducted by Cao, Griffin, and Bai revealed that students enrolled in an online course were more likely to be satisfied with the course when synchronous interactions were involved. Using a sequence of comprehensive quantitative data analyses, they examined 102 undergraduate students enrolled in computer information system course online. The foci of this study were on the chat room between learner-instructor, learner-learner, and learner-content. Due to the outcome of their analyses, the researchers suggested that improving student satisfaction with synchronous interactions would meritoriously raise their overall satisfaction of online courses. Factors that produced the results included instant feedback, rapport with instructors, and ability to brainstorm and collaborate with peers and instructors.

Murphy (2010) investigated the effects of two types of feedback remote students receive while learning how to read in English through computer mediated communication. Freshmen students from Japan, who were studying English as a second language, participated in the study. The two types of feedback used were "knowledge of correct response" and elaborative. "Knowledge of correct response" simply stated the correct answer and elaborative feedback provided hints and guidance towards the correct answer. Students in the study were grouped with partners and some received computer mediated correct feedback only while others received computer mediated elaborative feedback before the correct response. The quantitative results divulged that students who received the elaborative feedback before the knowledge correct responses scored significantly higher on the reading comprehension exercise than those who only received knowledge correct feedback. The qualitative results showed that students negotiated

meaning by engaging in exploratory talk with their partners; thus suggesting that negotiating meaning leads to more understanding. This study is important because it shows the importance of interaction and elaborated feedback on increasing student learning. Although Murphy makes no mention of the type of computer program used, the content is relevant because it shows there is a need to explore human elaborated feedback, through the use of, Skype as a medium to increase student learning. Furthermore, if computer mediated elaborative responses played a significant role then it is possible that human elaborated feedback will have a greater impact, so this study contributed insight into this issue.

In an effort to reduce student isolation and to address quality issues pertaining to delivery systems, Kno and Boswell (2011) conducted a comparative study of two instructional applications: Centra and Mediasite. Centra is a web-based conferencing program that allowed students to attend a live lecture and/or watch a recordings of lectures; the live lecture enabled students to participate in activities with one another and the instructor using live text chatting and audio and video through a web-cams and microphones. PowerPoint, image files, audio, and recorded video clips can be uploaded to the program, and Whiteboard was used as in traditional settings. The Centra program also allowed one-on-one conversations between the instructor and student, which provided students with immediate feedback. Mediasite records live face-to-face lectures; students who cannot attend class can have access to the face-to-face class over the Internet, but cannot participate. Students in the study were in a program that required their practical level of understanding through hands-on mock coding using observational

instruments. The Centra program was found to be the most effective because of its capability to allow for immediate feedback, student-faculty interaction, and because of its multiple tools. This study was relevant because the Centra program is similar to Skype.

Conclusively, the aforementioned studies supplied means of support for the four research questions. Educational technology improves student performance by providing learning experiences that focus on worthwhile goals, go beyond rote-memory, and make new knowledge and skills transferable to real-life situations (Januszewski & Molenda, 2008). Students' perception of their improvement is the outcome that Research Question One seeks to answer. The studies of Ciekanski and Chanier (2008), Grimes and David (2012), and Murphy (2010) helped to solidify the first research question because they focused on student outcomes, thus indicating that describing students' experiences and perceptions of Skype interactions with the instructor is a useful inquisition. Research question two focused on the instructors' perception of Skype's effectiveness to scaffold student writing. Because rapport is correlated with student achievement (Lillie & Wygal, 2011), the studies of Murphy and Rodriquez-Manzanares (2012) and Cao, Griffen, and Bai (2009) provide a foundation for research question two. Both found that students were satisfied and demonstrated improvement when instructors interacted with them using real-time communication tools. Research question three centered on students' perception of the effectiveness of Skype to deliver writing scaffolding, and therefore adds merit to the studies of Huang and Hsiao (2012) and Kno and Boswell (2011) who evidenced that synchronous tools improved skill levels, and students and instructors saw value and importance in using the tools.

Synchronous Learning Technologies

The scarce number of studies conducted on Skype created a need to expand on tools that have similar features. Some of the tools mentioned below were the main portals for conducting online learning spaces, while others were external tools. They all included features shared by Skype, such as chat, webcam, video, text, file-sharing, and multiple-user capability, but not all included live chat, screen-sharing, and video calling.

Adobe Connect

Morrison (2011) and Armstrong and Thornton (2012) tested Adobe Connect in an asynchronous online discussion course. Morrison researched the benefits and barriers of Adobe Connect to discover if Adobe Connect could was an appropriate tool to help construct an interactive synchronous environment that enabled deep discussions, various group activities, and a solid sense of communal interactions. Armstrong and Thornton identified discussion strategies that enhanced student learning.

Morrison (2011) found that Adobe Connect had the tools necessary to create effective synchronous classes, but that they do not always function properly. Students had difficulty signing into the classroom, some were bumped off, and microphones malfunctioned. Morrison also noted that seminar classes could not be effectively managed with Adobe Connect because students engaged in different conversation threads at one time. She attempted to alleviate the latter by having real time discussions using the microphone, but found that students were reluctant to speak verbally because they were intimidated for a number of reasons. Some felt they could not articulate well, some admitted to not knowing the answers, and others said they did not know their classmates

well enough to feel comfortable to speak through the microphone. Morrison contended that the biggest challenge was not being able to have a physical presence in the classroom. The inability to see body language, conversation cues, facial expressions, or hear vocal intonations and laughter made the learning experience between Morrison and her students more distant and disconnected. Both studies reported pitfalls with Adobe Connect, which caused frustration and anxiety in students.

Despite the flaws of Adobe Connect, Morrison (2011) experienced success with using the tool to create small group constructivist activities, which were overshadowed by the amount of time it took her to build the activities. Morrison concluded that using technology tools in education and businesses poses a risk of dehumanization, and therefore, suggested that more research be conducted to explore ways that technological tools can be used to do the opposite. Armstrong and Thornton (2012) concluded that if sessions are planned and organized, a synchronous virtual tool can be used to augment an asynchronous online graduate course to increase democracy and motivation. The current study can enhance the study of Armstrong and Thornton in that it will apply democracy by decentralizing or shifting knowledge of the instructor to students who connect knowledge that benefits them (Siemens, 2006).

Because the current study will center on the use of Skype to deliver one-on-one tutoring, it will add to the needed research that Morrison (2011) recommended. The current study will not directly focus on conversational cues, facial expressions, body language, and vocal intonations, but will examine student's perception of interactions between them and the instructor, which takes into account the human factor that was void

in Morrison's study. The glitches and pitfalls experienced by Morrison may be easier to resolve due to the one-on-one vis-à-vis format. Although Skype does not have as many tools as Adobe Connect, its simplicity along with the nature of the study will not require labor-intense curriculum building. Last, the current study was different from Morrison's study because it was student-led, which means students were not expected to show correct answers, students performed at their own pace, and students were in control of their own work by interacting with the teacher-tutor based on their specific needs.

Tucker and Neely (2010) evaluated the effectiveness of using web conferencing, particularly Adobe Connect, to support the Socratic Method of improving the learning of business concepts of online at-risk business students. Adobe Connect was selected as the platform because it was already available within the school's computer resources and faculty had prior experience with the software because it was used for faculty meetings and training sessions. Students were identified as at-risk based on the previous scores on the business management objective assessment. Forty-one at-risk students were emailed and encouraged by academic advisors to participate in any of the eight 90-minute synchronous sessions. Each of the sessions had specific agendas that centered on concepts of the business management assessment. Students were emailed reading material one week prior to each session, General announcements regarding the sessions were posted in the main forum, and the lead faculty made PowerPoint presentations to generate the discussions. Through the case study, the researchers sought to find out if Adobe Connect was an effective medium to provide adequate support for learners using

the Socratic Method and if students perceived they gained a better understanding of the material after attending the Adobe Acrobat Connect sessions.

The researchers learned through an end of program survey that students found the web conferences easy to assess. The results of the polling capability of Adobe Connect was unforeseen by the researchers. They discovered that polling was effective for evaluating student understanding of the concepts discussed. Basic orientation to the Socratic Method and instruction on how to use polling and the messaging within Adobe Acrobat Connect was needed at the beginning of each session because different students participated. Lastly, recordings of student interaction were hindered by the use of a phone conferencing bridge, which resulted in no audio archives. The authors noted two previous studies done on web conferencing to facilitate student collaboration, and therefore, recommended that further research be conducted on the effectiveness of video conferencing and that similar techniques be implemented to determine the value of synchronous learning experience (Tucker & Neely, 2010). The current study is an expansion of Tucker and Neely's study because it analyzed students and instructor's perception of their learning via Skype. Differences between Tucker and Neely's study and the current study were that the current study used scaffolding as a teaching technique and Skype as medium. With the exception of polling, Skype and Adobe connect are similar in that they include video and audio conferencing tools as well as chat.

WebCT

According to Lim (2010) sociocultural constructivists advocate that scaffolding enables the adoption of constructed knowledge. His goal was to examine the scaffolding

and knowledge appropriations among online collaborative cohort discussions. To achieve his goal, Lim evaluated the degree in which the chat tutorial fostered group learning. Lim (2010) explained peer scaffolding as "the extent of learning support perceived to be available from other students on providing different ideas and clarifying content issues during tutorial discussions" (p. 12). The study focused two groups of students taking an undergraduate information technology course. Participants took part in one-hour virtual seminars that consisted of a tutor and two student presenters. The online tutorial sessions took place in a WebCT chat room with 16 students to one tutor per group. The activity introduced students to computer-mediated work processes in which they had to create collaborative knowledge through participatory and reflective learning activities. A web survey was used to obtain information regarding students' experiences of the chat tutorial interactions on peer support and learning attainment from peers and the tutorial discussions.

Lim (2010) found that the results on others' perception of achievement of learning, which included the lack of peer feedback, were equivalent in both groups. Other results showed some students were motivated by the chat, while others reported the synchronicity and the technical problems made the tutorial activity difficult. Overall, he Lim (2010)concluded that that chat technology could enable peer scaffolding, but suggested the differences and difficulties reported may be strengthened by modifying the activity and by conducting future research. His study was significant because it was the most current application of Vygotsky's social cultural constructivism theory at the time this study took place. Similar to the current study, it focused on scaffolding, but in regard

to peer-to-peer in a virtual chat group setting. The current study focused on scaffolding between teacher and student in a Skype environment that consist of multiple synchronous tools.

In a qualitative case study, Devers (2011) examined the factors that contributed to trust and openness in an online course involving students from a Midwest United States university and a South African university. Students communicated with the instructor and with other students through WebCT synchronous chat. Inspired by sociocultural theory, Devers found it to be true that social interaction in an online course has a positive impact on cognitive development. Three themes resulted from the interviews: professor's contribution, feeling of anonymity, and textual communication. Students reported that the professor provided supportive dialogue during the chat sessions and that he responded to every student, unlike a traditional classroom where some students' comments do not get acknowledged. Students felt a sense of anonymity, which made them more open and willing to participate in chat discussions because they did not have to be seen. The text feature allowed students to have more time to think and edit before submitting their responses.

The current study applied the sociocultural theory in examining the significance of social interactions between the teacher and students on their cognitive development. However, the current study challenged Devers's (2011) findings of anonymity and textual communication because it used Skype's audiovisual feature. This study was of the persuasion of Casal (2012), Mongillo and Wilder (2012), Sullivan et al. (2010), Nsiah (2010), and Bach, Haynes and Smith, (2007) that students are more apt to trust a

professor that they can see. While texting does allow students more time to think, students in this study had scheduled as well as student-initiated unplanned opportunities to discuss their work one-on-one with the instructor. Therefore, they had time to plan what they wanted to discuss.

Elluminate Live

Elluminate Live has many of the same features as Skype, such as chat and audio. In addition it has video and session recording. However, its video feature is not the same as Skype's videoconferencing tool. While Skype's free version does not allow for sessions to be recorded, its chat feature allows users to view textual dialogue. Casal (2012) analyzed the pedagogical principles surrounding *Elluminate Live* as it was being employed for a synchronous tool in a virtual learning setting. Her literature emphasized seven principles of effective teaching that a synchronous tool should draw forth: strengthen teacher-student contact, enhance reciprocity, promote active learning, provide students with responses and reinforcement, give importance to the duration of a task, involve high expectation, and allow for different abilities and learning styles. Subsequently, Casal's qualitative study focused on pedagogical strategies that are effective for using synchronous communication for the process of learning and teaching of language studies. Her results revealed the importance of student-teacher interactions to strengthen the participation of students. She found three aspects to consider prior to developing teaching and learning processes through Elluminate *Live*: small groups were more effective, teacher training was needed to help use it, and so was advance preparation. Additionally, her participants, who were tutors and teachers, suggested the

need to have no more than two activities per session and that the maximum length of each session is a full hour, with a frequency of at least two sessions per month. It was suggested that this tool be used for developing listening skills, speaking skills, as well as reading and writing skills because it allows teachers to answer questions and students to practice reading, writing, and oral skills. Because Skype and Elluminate Live share many of the same features, Casal's study also provided pedagogical principles that could be applied to the use of Skype.

Chat

Ye, Lo, and Huang (2011) categorized chats, teleconferencing, and other social Web technologies as real-time synchronous environments. Although their literature review, which comprised of studies from the early 1980s, predated the emergence of current synchronous tools used for distance education, it showed the benefits of implementing synchronous tools in online collaborative environments. Inspired by older studies of their literature review, Ye et al. developed a computer-supported system that enabled procedure facilitation and real time chat-room to study the effects of scaffolding on English as-a-foreign-language students in writing collaboratively with peers. They used a system called *Process-Writing Wizard* to provide process scaffolding and a synchronous online chat room to facilitate virtual collaborative writing practice. The system allowed multiple second language students to work together on a writing task through the Internet, and it helped students develop such strategies as brainstorming and writing strategies, along with the creation of team agendas and creation of outlines.

Instruments used were attitude questionnaire, students' writings, and students' synchronous chats.

Sullivan et al. (2010) had similar findings to those of Ye et al. (2011) that chat be used as synchronous learning tool for distance education environments. Although Sullivan et al. study found that shared representation and text helped foster the design and creativity of a Pre-K classroom, the study supported that isomorphic formats can also lead to the creation and production of essays for struggling students. They discussed the importance of dialogue in regard to speech, which is shaped by three factors: the listener, possible responses of the listener, and the context of the conversation. Furthermore, they stressed that the social and synergetic dialogue be considered tools that enable students to enact and make sense of the world and allow them to organize sequential interactions in their cultural environment. The information on real-time dialogue was relevant to this study because it focused on live scaffolding, which is a form of dialogue specific to an academic culture to guide the learning of others (Bach, Haynes & Smith, 2007) by the use of Skype.

Miscellaneous Synchronous Tools

Greener (2009) conducted a reflection study, which she explained to be a structured range of perspectives built on shared experiences. She reflected on the following tools to be used online: blogs, wikis, e-mail groups, synchronous conferencing, and discussion forums. It was believed that students would do better in social networking setting; however, Greener found that students actually did not put any value in the work they did for blogs and wikis as much as they did for the discussion forums. She

attributed this to the lack of structure, which she believed stifled students' enthusiasm to engage when it is part of an academic project. Synchronous conferencing is the tool most relevant to Skype, and thus is entitled to more focus than the other tools used in this particular study. As mentioned above, Greener pointed out that students do not see any excitement in using blogs and wikis for education, although they are socially structured. In synchronous conferencing, although linked to social experience, students maintain a level of excitement because of its immediacy in solving concerns. In addition, there is shared power between the users in synchronous conferencing, but due to increased spontaneity, students tend to feel they have less chance of making the right impression or saying what is right.

Nsiah (2010) explored the potential for interactive distance educational technology to provide quality education to narrow the chasm between privileged and underserved high schools in Ghana by studying successful and unsuccessful interactive distance education programs in the United States. The Theory of Transactional Distance was the basis for this study. Nsiah cited the definition of Theory of Transactional Distance to be the gap of understanding that occurs between teachers and students due to geographical distance, which needs to be connected through distinguishable techniques in instruction and the facilitation of interactions. The purpose of exploring the three sites regarding interactive technologies was to provide contextual referencing for future program development and to replicate successful practices in Ghana. Results from the three cases included the following: The schools used real-time videoconferences and two-way desktop videoconferencing to complement the asynchronous learning environment;

conducting oral interviews with students on their work helped to recognize and reduce plagiarism; failure issues involved not providing instruction at appropriate levels, lack of skillful ways to address student needs, and unmotivated students. Nsiah made many recommendations, but only two are significant to Skype. First, interaction between student-teacher and student-student should be a priority in distant education programs, and it should fundamentally bridge the transactional distance between the instructor and the student. Secondly, distance online programs must afford students the opportunity to develop a social presence by engaging in social learning and community building through the implementation of Skype, Yahoo Messenger, and other social networking tools.

Locatis et al. (2011) conducted a mixed methods study to explore whether or not the sense of presence contributed to the success of 81 medical students, ranging from first to fourth year. The researchers tested competency and measured instruction and the technology and compared circumstances, which may have influenced the sense of presence under in the context of two types of media and two degrees of a student's physical presence: 1) co-located videoconference, 2) co-located webcast, 3) dispersed videoconference, and 4) dispersed webcast. All students listened to lectures through videoconference or webcast. Co-located students in the videoconference setting used the technology to communicate with their instructor and were able to communicate with one another face-to-face. Remotely located students used the technology to interact with both the instructor and one another. Students using webcast, both the co-located and the dispersed used the chat tool to interact with the instructor and with one another, but only the co-located webcast students were also able to communicate orally face-to-face. The

results from students' test scores, web content, instructional ratings, and technology ratings were compared. Overall, the researchers found no significant differences in measures. The webcast students reported more encouragement and instruction to be more interactive than co-located videoconference students. Evidence from test results and student reports indicated that the highest level of interaction occurred among the dispersed videoconference students. The researchers concluded that although the results did not support the proximity as a sense of presence that affects performance, communication medium has a strong possibility to affect interactivity. This study was relevant because it led to the exploration of using a communication medium, particularly Skype, to determine if interactivity between student and teacher has any effects on student learning.

Kenning (2010) pointed out that thought and verbal expression (orality) and literacy are best understood through synchronous functionalities. She conducted a comparative study of *Lyceum* and *Voice Direct* in a language learning classroom setting to argue that current documented studies of functionalities and affordances of synchronous tools are not sufficiently addressed because they did not reference a particular context that included the assortment of factors, thus rendering inconsistent implications on how they shape online interactions. Regarding chat and combination of voice and text chat, Kenning identified four factors important discourse patterns: their integration level with other tools, user privileges, number and function of icons, and types of transmissions. She denoted that because the variance in functionalities of synchronous tools enable and limit certain types of interaction, there is a need for detailed studies on

specific technological environments. Subsequently, the current study has the ability to provide such detail because of its qualitative focus on students and instructor's perceptions.

Mongillo and Wilder (2012) found that when learners perceive tasks to be authentic, such as responding to questions or communicating with a real person, they are more likely to develop literacy skills. Hodges and Hunger (2011) concurred, but added that authentic learning does not occur in the learner, in the task, nor in the environment, but all three components together, which are the dynamic interactions. They argued that asynchronous tools could not deliver interactive dynamics because learners are not connected in a meaningful way. Hodge and Hunger found that shared electronic whiteboards, such as collaborative tools as Wimba and Elluminate have been solutions to the lack of dynamics resulting from asynchronous tools. As such, they advocated for the need and exploration of other tools that allow for dynamic authenticity of learning math (2011). Moody and Wieland (2010) advocated for the use of GoToMeeting, Marratech, FlashMeeting, and Elluminate to build and maintain relationships in an asynchronous classroom setting.

Scott, Castaŋeda, Quick, and Linney's (2009) naturalistic study involved 34 students taking an animation course. The students used a videoconference tool called FlashMeeting to communicate in real-time. Like Skype, FlashMeeting enabled parallel communication via text chat and emoticons. Unlike Skype, FlashMeeting allows up to 25 shared audiovisual communications at a time, and it does not support file-sharing or screen sharing. Users vote and send URLs. This six-month study is significant to the

current because it focused on the context and not the content of the similar audiovisual software. Scott et al. found that the use of the videoconference software had a positive impact on student learning. It enabled peers to connect synchronously from around the world, and build a community in which they discussed, shared, collaborated, and assisted each other with projects. Participants were self-motivated to use the program and were not guided by formal scaffolding of a mentor or teacher. By contrast, the current study used one-on-one scaffolding led by an instructor to support student learning.

Cunningham et al. (2010) conducted a study of a synchronous seminar at Dalarna University in Sweden of 8 to 10 students enrolled in online English for Academic Purposes course. Students' native languages varied, consisting of Arabic, Swedish, Chinese, Turkish, Spanish, and Persian. All had low English proficiency skills. The teacher used a synchronous software called Marratech, which was developed in Sweden, later bought by Google, but has since then been discontinued. With the exception of Whiteboard, Marratch employed the same tools: Chat, video, and VOIP. There was no mention of the ability to screen share, which is a feature of Skype. The intention of Cunningham et al.'s study was to explore the use of multimodal tools in Marratech seminar that supported communication between students and teachers in an online real-time learning context.

Cunningham et al.'s (2010) study revealed a number of significant phenomena that must be considered before using synchronous software as an instructional tool. First, a few minutes of each seminar was spent on instructing students on how to use some of the tools, such as the pointer and the text box. Sometimes the audio and video were not

synchronized, which caused a delay in communicating information, and more time spent repeating information. Poor connectivity problems existed, which caused some students to either drop out of the sessions or have to repeatedly keep trying to reconnect. The quality of the voice channel was poor, which made it difficult for some students to take part in the seminar. However, due to the multimodal makeup of Marratech, the study showed that almost all of the problems could be compensated using an alternative tool along with the inherent ability of synchrony. When the sound was poor, the teacher was still able to see students' gestures and facial expressions to determine their level of understanding. Despite the poor video at times, the teacher was able to hear students' responses and could still continue teaching. The pen pointer was used to compensate for the poor voice reception. The few minutes spent teaching how to use the software was only in the first few sessions. The only problem that could not be addressed was the poor Internet connectivity because it was due to geographical areas in which connections were sometimes limited. Despite the disadvantages of the synchronous software, they were outweighed by advantages and the advancement of new synchronous tools.

Cunningham et al. (2010) study was significant to the current study because it used a synchronous component tool, which is similar to Skype, in the online course to allow real-time learning between teachers and students. They found that voice communication had a positive impact on learners' output, which brought participants closer because they were able to express emotion, show personality, and share socio-geographic background information. Because this study used Skype's videoconference feature, it may yield similar results to Cunningham et al.'s study.

Generally, texting is believed to decrease or diminish students' ability to write acceptable English prose (Thurlow, 2003). Rosen at al. (2010) found that frequent texting led to better informal writing because of the similarities in style, especially in participants with little to no college education. They also discovered that frequent texting led to poor quality writing in formal writing situations for students with little to no college education, whereas students who had college education were not negatively or positively impacted. Because Skype's texting interface is similar to instant messaging (IM) and texting, this study would be most relevant if the current study focused on students' prolonged use of Skype texting as a means to improve students' ability to write. Newman (2007) reported that factors regarding how students use Skype may depend on whether students see the Skype interface as a formal or informal environment or whether additional features of Skype are used. He argued that any communications system should be user-friendly to allow students to focus on the content and conversations, and purported that Skype's simplistic design does not require users to be technology savvy.

Bower (2011) reported that the synchronous tools, such as voice, text-chat, note-taking, whiteboard, and screen-sharing, which are embedded in systems like Adobe Connect, Elluminate, and WebEx provide direct means for improving learning outcomes because they allow for information to be presented, processes to be modeled, and ideas to be shared. Although technology can be a medium for moving beyond the three R's to the four C's, which are the development of communication, collaboration, critical thinking, and creativity, students' level of comfort with the technologies play a big role. Students who have little to no technological skills may be least likely to acquire the subject matter

concepts, while students who possess more competent technological skills may be more likely to grasp concepts. Bower found that students who took part in courses that were mediated by technology were more satisfied with the synchronous course than did students who had no previous experience with these tools. The goals of the Elluminate and WebEx in this study were similar to the goals of the current study.

Sim, Har, and Laun's (2010) study was consistent with Bower's. Their study was conducted on 32 1st year undergraduate females in a Malaysian university to determine how they used negation to learn language in a face-to-face environment compared to that of a synchronous computer-assisted (SCA) environment, specifically via MSN Messenger and Yahoo Messenger. They paired high proficiency learners (HPL) with low proficiency learners (LPL) to study the differences, if any, between the two levels of students. The mixed performance dyads were given tasks and studied in both settings. The tabulated indicators showed that the synchronous computer-assisted environment provided opportunities for more intelligent responses from the low proficiency learners and more intellectual input from the high proficiency learners more than the face-to- face environment. Both environments proved to provide opportunities for increased learning, but the synchronous computer-assisted environment allowed for a wider range of syntactic and semantic modifications, which in turn enabled further opportunities for low performing students to communicate comprehensibly and to recognize form. Sim, et al.'s study provided a framework for the current study because it found that synchronous tools have a greater impact on improving the learning of low proficiency students.

Razagifard and Rahimpour (2010) used a synchronous tool, Yahoo Instant Messenger, to examine the effects of computer-mediated corrective feedback on beginning level English learners. They found that students who received instant feedback through text-chat showed higher gains in grammar acquisition than those who did not receive instant feedback. This information is relative because it applied a synchronous tool to enhance the English skills of ESOL learners. Razagifard and Rahimpour suggested that further research is needed on other corrective feedback techniques and other computer-mediated tools. Therefore, this study can be an extension because it will use scaffolding, which is a type of feedback, through Skype to enhance the English proficiency in at-risk students.

Sullivan et al. (2010) compared student problem solving in three synchronous settings: 3D, manipulable objects, shared representations, and text, which was referred to as multi-user virtual environment (MUVE); shared representations and text (SR+T); and text (TEXT). The basis of their study was derived from various theories on synchronous learning. Participants in a synchronous learning environment must have a shared understanding of the tasks. Images on a computer screen were shared, which enabled participants to focus on the concepts for discussion and further elaboration. Multiple modes of interaction typically found in synchronous learning environments promoted student learning through a combination of semantic and inscription coordinated sequencing. Sullivan et al. found that sharing and manipulating 3D objects in real-time is advantageous in education because it supports collaboration, learning, and design. Sullivan et al.'s study was significant because it focused on design and production of

objects, which can be associated with the skills needed for the production of writing an essay.

The undergraduate childhood development students in Sullivan et al. (2010) study used iChat and Yahoo! Messenger for chatting as opposed to live audio chat. The researchers made it clear that students were not learning new material, but problem solving by applying and synthesizing concepts and theories already learned to design a Pre-K classroom. Contrary to their hypothesis of multi-user virtual environments having the greatest impact on student learning outcome, the shared representation and text format yielded the highest impact on student learning. Their analysis showed that the students who participated in shared representations and text integrated course concepts more than the other two environments. The synchronous chat along with representations elicited a cognitive presence from participants, which Sullivan et al. quoted Garrison (2000) meaning as, 'the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication' (p. 641). Because Skype also allows users to share their work through its screen sharing tool and engage in live text (chat), it can also enable students to construct meaning via sustained student-teacher communication.

Huang and Hsiao (2012) conducted a qualitative study of 16 online instructors from various colleges of a university in the Midwest. Eight instructors used only the asynchronous tools provided by Blackboard and eight integrated the use of third party synchronous tools found in Blackboard, such as Tegrity, blog, wiki, podcast, and Elluminate Live! Their literature review indicated delayed feedback and lack of social

interactions as the main drawbacks for asynchronous learning environments. Consequently, they believed that an integration of synchronous tools for distance education will alleviate the problems associated with asynchronous environments. They argued that an understanding of instructors' experiences and perceptions is important because their understanding and acceptance of a technology determines the successfulness of the technology in learning and teaching. After conducting interviews, they found that two-way web conferencing established instructor-student connections, and it helped decrease communication barrier between instructors and their students. The downside of a synchronous environment, as reported by participants in their study, is that instructors did not like that not everyone could participate. They explained that conflicting schedules and time zones made it unfair for students who wanted to participate but could not. Instructors who led only asynchronous learning environments reported that they would not adopt synchronous tools unless they had substantial proof of the quality of synchronous tools. Overall, the eight instructors who used synchronous tools used them for online office hours, student presentations, content review, discussion on assigned topics, and student group communications. These instructors were satisfied and claimed that synchronous tools allowed them to cut back on the workload involved with online teaching. The current study added to these findings by analyzing the instructors' feedback on their use of Skype as a medium for the process of teaching.

Wright, Conlon, and Wright (2011) conducted a single case study on a 10 year old male student who struggled with reading. The purpose of their study was to determine if Voice over the Internet Protocol (VoIP) would be effective in delivering intervention

services to students in rural and remote areas. The selected tool was iChat, which comes on Apple's Mac OS X operating system. The reason the researchers selected iChat was because it provided clear screen sharing resolution, which enabled the teacher to provide prompts. The study consisted of 40 sessions, 30 were done via iChat and broken into the following: 10-week baseline, 10-week treatment period, and 10-week follow-up. The researchers predicted that there would be little growth during the baseline period, but treatment would covary with positive growth in reading ability. The sessions contained the seven strands that were considered effective for face-to-face format: "phonological awareness, phonics, spelling, fluency, irregular words, vocabulary, and comprehension strategies" (p. 3). As predicted, treatment from the baseline sessions yielded minute growth. However, with the exception of the irregular word test, post-treatment results were significantly high. Non-word reading score increased from less than 1st percentile to 8th percentile; text-reading increased from 1st percentile to 4th percentile, and reading comprehension increased from 2nd percentile to 10th percentile. Based on the reading gains of the student, the researchers concluded that VoIP-based instruction can be effective. They suggested that VoIP-based instruction be further investigated. Because this study focused on instruction via Skype, it served as a framework to draw upon.

Peacock et al. (2012) orchestrated a nine-week qualitative mixed methods collective case study on four tutors and three cohorts, which centered on the interactions between tutors and learners through Wimba Classroom version 5 to gain an understanding of the role of synchronous learning environments and to develop practical guidelines. Wimba interface enabled students and tutors to talk to each other in real time

and to use audio and video to share digital material. Data collection consisted of self-completion questionnaires, participants' video diaries, and semi-structured interviews. Peacock revealed that in all three case studies, a synchronous learning environment could be effectively used to support learning. Students and tutors had positive attitudes about the tool, despite some limitations of technical difficulties, mostly pertaining to audio or video. One student reported that if Wimba's interface were more like Skype, then the discussions would flow more naturally, and would enable them to have their hands free to take notes instantaneously and simultaneously. Overall, participants found the tool to be easy to use. Student participants reported that through discourse, the synchronous environment enabled them to take more responsibility in their learning, to check their current knowledge and develop new understanding, and to get immediate feedback. Tutors reported that the synchronous learning environment was less demanding once they became familiar with the system. Tutors also discovered that they needed to be more precise in order to correct misconceptions and misunderstandings. The interviews and diaries of the tutors showed that tutors reflected on how their interactions with students through the synchronous tool was different than that of a physical face-to-face setting, in which they were lecturers; their role changed to that of a facilitator, as they allowed the sessions to be student-led.

Peacock et al. (2012) suggested exploring future studies on how synchronous learning environments can be used differently to enhance learner support. This study added to Peacock et al.'s study because it explored Skype's ability to support the learning of underprepared students in an undergraduate remedial course.

Video Conferencing

Smyth (2011) presented a contextual model for enhancing learners' interaction using video communication. She reported that there is an emerging trend in higher education where the emphasis is on learners and learning. Smyth argued that the advent of videoconferencing software should become embedded in online asynchronous learning environments because they support knowledge information through discussion and sharing of knowledge and perspectives in both formal and informal face-to-face interaction. Videoconferencing, she maintained, is learner-focused as facilitators interact from the point where learning needs to begin for each learner. She defined connectivity as an important element in which space is supported by technology but does not dictate learning. The intent of connectivity is to obtain balance between learners' needs, their goals, the curriculum, and the design. Videoconferencing allows learners to be more relaxed and communicate more frequently, which Smyth argued, helps students become less hesitant to communicate. She pointed out that through videoconferencing, synchronous dialogue enabled students to develop skills in reasoning, oral and written communication, reflection, and interpersonal interaction.

Smyth's (2011) model of the contextual influences of learners is relevant to the current study because she focused on enhancing learning using video communication, which she believes provides opportunities for authentic online collaborative learning. Smyth did not mention any specific video communication software, such as Skype, but she discussed the potential of aural and visual real-time communication technologies. She emphasized how such technologies make a significant impact on learning because

they bring online learning closer to face-to-face learning. Smyth indicated there is a gap in video communication technology and recommended a team approach be used to evaluate how video communication technologies can best be used in certain disciplines and at various stages in a program. Although this study did not implement a team approach, it added to the body of literature by focusing on Skype, which allowed for video communication.

Ciampa and Revels (2012) used grade delta variance and students' ratings of satisfaction with the course and the instructor to measure the value perceived through online learning. The study took place in four online undergraduate courses. In one course, each student had complete access to email, chat, and videoconferencing tools. In the second course, students had no access to the interactive tools. Grade delta variance was measured by pre-assessment tests and final exam. A satisfaction survey of seven questions was completed by students. Results showed that the interactive technology did not have an impact on five of the survey questions pertaining to the instructor and performance measures. The researchers found it surprising that students who had no access to interactive technologies rated two of the questions: "I have learned a lot in this course" and "My instructor treats me fairly" significantly higher. They suggested that further research be conducted to examine why students who had no access to interactive technologies scored higher on the two survey questions than those who had access. Although Cimpa and Revels did not mention a specific videoconference tool, their study is relevant to my study because it leads to a challenge. Because this study examined interactions between teacher and students and not between students, its results of student

and instructor perceptions could be seen as more salient compared to those of Cimpa and Revel's study.

Moody and Wieland (2010) reflected on their administration program at Fort Hays State University as it transitioned from traditional face-to-face to completely online. During the transition, they realized that socialization and personal face-to-face exchanges among faculty and between faculty and students had diminished into emails, telephone calls, instant messaging, and infrequent workshops. Consequently, students' grades had begun to suffer. In order to salvage rapport and relationships between faculty and students, they investigated many online tools, such as Articulate Presenter and DyKnow, but found only one tool that would give students the human interaction they needed in order to grow academically. Videoconferencing allowed them to create the social presence needed for establishing and building trusted relationships between faculty and students in the online courses. Video/audio-mediated communication led to stronger trust and rapport levels than text and chat. Moody and Wieland held that social presence is the embodiment to building a community of learners, and it must be established first to initiate learning in distance education platforms. The investigators implemented videoconferencing into all administration courses because it permitted instant one-on-one or small group chat and video communication and file sharing. The researchers did not allude to any specific videoconference software. Because Skype has the same capabilities for videoconferencing that were used in the study, it supported that Skype may be an effective tool to deliver the human touch that is missing in asynchronous learning environments.

Vasquesz and Slocum (2012) advocated that the use of real-time two-way audiovisual technology to tutor students who were at risk in reading provided a possible way to make high-quality tutoring more widely available for K-12 students. They argued that using online synchronous format allowed for flexibility in instruction due to a variety of tools such as texting, white board overlays, video, and audio. However, they discovered that little evidence was found regarding synchronous online reading modalities used to deliver instruction to at-risk students in this group. Therefore, they conducted a study on four 4th grade students from Philadelphia who were identified by the Woodcock-Johnson III Test of Achievement (WJ-III) as at risk of reading failure and identified as having a learning disability by the district school psychologists.

The students in Vasquez and Slocum's (2012) study were tutored by four pre-service teachers from a local university. The tutors were trained to teach reading based on the National Reading Panel's (NRP) five areas of instruction critical to success for beginning readers. The four students received four supplemental weekly sessions that lasted 50 minutes for 16 weeks, in addition to their normal 60 minutes of reading instruction delivered daily by the district. Tutoring sessions were delivered using an Internet connected PC or MAC computer with a webcam and an audio connection with either a binary headset and microphone or a telephone headset. Results from a collection of pretests and posttests revealed considerable gains. On average students' scores increased by 161.9 on oral and reading fluency, which was higher than expected. The importance of this study is twofold. The tools used to deliver tutoring were similar to Skype, which shows that Skype and scaffolding may be used to address the academic

needs of first year at-risk college students. Therefore, this study helped bridge the gap of knowledge on Skype and on current tutoring practices.

One of the features of Skype is videoconferencing. Karal, Çebì, and Turgut (2011) conducted a study to determine if students' perceptions about distance courses would change after having been exposed to a videoconference course. The nine undergraduate students had not taken videoconference courses before the study and all had little knowledge about the type of course, which the researchers believed added to their prejudice of synchronous distance education. Five factors were found to have caused students' perceptions of synchronous distance education to change: the teacher, technical problems, the environment, the course, and the distance. According to their findings, some students felt the teacher lacked classroom control, which led to misconduct. Students were not able to develop a connection with the teacher due to scarce interactions. The technical problems involved were cuts, echoes, and freezing, which were worked out after the first week. In addition, the screen quality was low, students complained of not being able to make eye contact with the teacher, and therefore, lost motivation. Improper camera positioning in the synchronous videoconference classroom caused an adverse reaction from the students.

Students in the study believed courses that required richer contexts of high interaction were better for synchronized remote education, but courses with long lectures caused boredom, which led many to off-task, especially since the teacher did not address any misbehavior. The teacher's perception was not discussed, so it is not certain if the teacher could see the students well enough or hear them to detect any distractions or

misbehavior. As reported in their findings, the participants developed both negative and positive ideas about the course, after taking the videoconference class. Only six positive ideas were reported: benefits of having experts, ability to access information faster, unlimited access to archived class sessions, fitting in with the class more easily, and behaving comfortably. Students reported "communication deficiency, eye-contact problem, connection problem, visual and sound problem, feelings of disarray, weak teacher control, and display of unrelated course behaviors" (Karal et al., 2011, p. 5) to be negative factors. Although the negatives outweighed the positives, the researchers claimed that some students liked the new technology and decided to adopt it, while others were not willing to adopt due to the many problems. An exact percentage or number was not provided for the ones who decided to adopt the videoconference class environment. Karal et al.'s (2011) study demonstrated that the implementation of synchronous tools alone does not impact student learning; it is the way tools are used. The question arises from this study whether or not digital synchronous one-on-one student-teacher communication can have an impact on student learning and on their attitudes. The current study has implications of Skype's functioning and flaws, and therefore, adds to this body of knowledge.

Skype Applications

Few studies were found on Skype for instructional purposes. The paucity of empirical studies conducted on Skype for instructional purposes may possibly be because synchronous tools, such as Skype are just beginning to emerge in the learning management systems (LMS) of online institutions of higher education. There were no

studies found on Skype's use to improve the proficiency of underprepared students. Majority of the studies that were closely associated with the way Skype was used in this study centered on Skype being used to teach English as a second language (ESOL). The studies described below did not all focus on Skype being used for instructional purposes, but were relevant because they provided specific information about Skype, which helped to interpret the results of this study.

Skype for Communication

Nunn, McGuire, and Crowe (2010) conducted a quantitative study on the cost and profitability of Voice over Protocol (VOIP) being used in businesses. Nunn et al. found that the Internet connection failures were found to be the cause of reliability issues, and signaling information and access points led to viruses. Despite these issues, the researchers pointed out that technology obsolescence would render faster, more improved capabilities that may lead to change in cost. Companies such as Bank of America, Ford Motor Company, and the Minnesota Department of Labor found the benefits of VOIP to be more advantageous than the issues. Being among the first to implement the technology, the companies sustainability of VOIP were because of decrease in cost, merges, tele-working, multimedia conferences, relocation, a unified message software, and high powered-call centers. This study indicated that if multimillion-dollar corporations can implement VOIP as a way to improve communication and training within their company at a reasonable price, then universities may benefit from its uses. Because this study focused on only the cost of VOIP, it indicated a need for Skype to be studied in many other ways.

Kiriakidis (2012) examined how Skype features could be used between school and district administrators to increase their self-efficacy. The study centered on self-determination theory, which he described as the belief that autonomy, competence, and relatedness are the driving forces of a person's behavior. Thus, autonomy is fulfilled when individuals choose to participate in activities without external pressure, and when individuals are engaged, they will further develop ability in the action and gain confidence while doing so. Kiriakidis's study was drawn from his literature review that self-efficacy is necessary to help school and district administrators strengthen their impact on stakeholders, which ultimately improves teaching and learning. Kiriakidis's qualitative study consisted of 22 school administrators and 17 district administrators who used Skype to communicate with their colleagues and personnel in central office.

Through interviews and transcriptions, Kiriakidis (2012) discovered that Skype's video-conferencing, screen-sharing, instant messaging, and chat features enabled effective interactions between school and board administrators. Participants reported the following data about Skype: it increased interaction among administrators which resulted in improved self-efficacy, it was more effective than using telephones and emails, it was used to solve challenges quickly and directly, it was effective for program development purposes, it enabled instant collaboration, and it motivated and assisted administrators to realize the effort required of them to reach set goals. Additionally, he found that the Skype interactions enabled administrators to support one another and share leadership ideas, plans, and expertise, which gave them confidence and increased self-efficacy. Kiriakidis concluded that continual mentorship with highly trained and proficient

administrators may help K-12 administrators improve their administrative practices because it will afford them opportunities to collaborate and focus on needed areas for continuous growth.

Kiriakidis's (2012) study was noteworthy because it provided evidence that Skype can be used to help motivate and improve. Although his implications and recommendations were towards leadership in K-12, his protocol had the same basic purpose of this study. Whereas he focused on using Skype to build mentorship among colleagues to seek self-efficacy and improvement, this study used teacher-student interactions to build confidence in students for continuous writing improvement. Additionally, Kiriakidis's emphasis on having highly trained and proficient personnel available to enable continuous growth in individuals was similar to that of Vygotsky's cognitive theory, which is part of the framework in this study, for it advocated the importance of social interaction as a medium by which learning develops by collaborating with those who are more skilled in the intellectual disciplines that assist learning.

Skype in Clinical Settings

Krout, Baker, and Muhlberger (2010) designed a pilot to compare online Skype and face-to-face songwriting of four music students: two from an Australian university and two from an American university. The students volunteered for the pilot, and had no previous experience writing songs. The purpose was to determine if Skype or similar cost-effective software would be effective in helping songwriting therapists collaborate at a distance with clients to produce songs. First, student participants worked in pairs as

they collaborated with peer participants from the same university. Next, the students crossed over without randomizing and worked with a peer from the overseas university. Collaborating with their peers in both settings, student participants produced four songs: two challenges they perceived from the clinical training and two perceived positive experiences of clinical training. Data consisted of participants written reflections and interviews, and video recordings of the session interactions.

Themes were identified about students' perceptions of songwriting experiences during the pilot and about how Skype impacted their experience writing songs. The participants reported that working collaboratively made them aware of the power that songwriting had as a clinical intervention. They discovered that they had the same successes and challenges with clients although from different continents, and they were nervous about their abilities before taking part in the pilot, the sessions enabled them to have more confidence in their songwriting abilities, they became more aware of their strengths and weaknesses, and they learned about the songwriting process. The participants reported the following regarding the use of Skype: the elements of songwriting via Skype and face-to-face were the same; the collaboration process was similar in both settings; auditory delays were found to be disruptive by some, but others made use of the delays to develop structured turn-taking and repetition to produce succinct statements; connections were sometimes problematic because of screen freezing, auditory or visual delays, and signal drops, which affected dialogue and music creation; and poor image resolution contributed to awkward communication as expressions froze and faces distorted, causing misjudgment of facial expressions (Krout et al, 2010).

Krout et al. (2010) concluded that despite technical issues, using Skype in a clinical setting was not much different from collaborating face-to-face. Overall, students' feelings towards the songwriting process were positive. The technical issues experienced by Skype during the time of the study, the authors explained, have since improved by a new free version. The authors pointed out that audio and video quality is dependent upon camera resolutions, camera frame-rate, processor capacity of the computers, and network bandwidth available at both ends. They added that their intention was not to use Skype as a replacement for face-to-face therapy-client sessions, but to make it an alternative for clients who could not drive to sessions, and they discovered that Skype is an effective tool to help student songwriting therapists practice collaborative songwriting skills. The pilot study was relevant because it had three similarities to the current study: writing process, inexperienced writers, and use of Skype software. An analysis of the results of this study helped to strengthen the results found in Krout et al.'s study.

Gibson, Pennington, Stenhoff, and Hopper (2010) were consultants who employed the use of Skype to teach an intervention strategy called Functional Communication Training (FCT) to a preschool teacher and a teaching assistant who had difficulties with the elopement of an autistic student named Shane. Gibson, et al. defined elopement as anytime the student left his assigned seating space on the rug. A camera was positioned in the room so that the consultants could see the entire rug that the Pre-K students sat. The teachers wore wireless microphones to hear verbal feedback from the consultants. The classroom audio was captured by the internal microphone on the class computer. The consultants first observed the entire Pre-K class for typical behaviors and

then focused on Shane's elopement behaviors. They hypothesized that Shane only left the rug to get items that he was highly interested in. To reduce this behavior, the consultants trained the teachers to implement Functional Communication Training (FTC). FTC simply meant the use of an alternate communicative response to access an identified reinforce. The teachers were trained to model and use prompts to reduce Shane's elopement from the rug. Specifically, the teacher raised her hand and the teacher's aide presented a basket of toys and told Shane to pick one. This was done repeatedly until Shane began to follow. During instances when Shane did not raise his hand, the teacher placed her hand under his elbow and lifted it upward, and then the teacher assistant presented the basket to Shane. From the beginning baseline condition Shane's elopement was 96% and by the end of the second introduction to the intervention Shane's elopement was reduced to 5%.

Gibson et al. (2010) study is important to the present study because it provided evidence that Skype can be used to foster learning and provide intervention. Although the consultants did not interact one-on-one with the student who needed intervention due to the severity of his mental state, they conducted multiple real-time intervention sessions with the teachers and produced favorable results. Gibson's et al study inspired hope that the results of the current study may help support the contention that Skype can be used effectively for the intervention of underprepared students because it is similar to being in the actual setting.

Hall (2013) conducted a case study to determine the effectiveness of using video calling on 32- doctor of physical therapy degree students who were dispersed at various

sites for internship. Effectiveness was measured based on student preference, time, and cost-effectiveness. Although required, 27 of the 32 students participated. Hall analyzed descriptive data based on student feedback and comparative analysis of cost and time efficiency. The results showed that 72% of total responses were positive towards the use of Skype, but after the video calling, positive responses were a little over 91%; 67% preferred video calling versus onsite visits. In the questionnaire, students reported that using Skype allowed them to put everything into perspective with professors in a few minutes, provided opportunities for them to communicate what was going on in the clinic with professors, and enabled them to maintain student-coordinator and student-professor relationships. Hall concluded that Skype can provide opportunities for academic coordinators of clinical education to develop clinical partnerships beyond local or busy metropolitan area clinics.

Hall's (2013) study is fitting because it provided further evidence that there is a lack of documented studies conducted on Skype used in regular education settings. Secondly, it is relative because students' required use yielded positive responses. Because the current study will require students to use Skype, it will help solidify students' responses on the use of Skype. Thirdly, the pilot showed that Skype enabled students and professors to maintain a relationship, which is one of the objectives of the current study.

Skype for Instructional Purposes

Macharaschwili and Coggin (2013) tested the use of Skype in a blended classroom setting. A proxy student was paired with a distance student in a doctoral

course that took place in a traditional classroom setting. The proxy student was in charge of making sure the online, distance learner had full access to all activities in the traditional classroom by adjusting the laptop camera and the speakers. Skype allowed the distance learner to participate in small group discussions, whole-class discussions, and to make presentations to the class using screen-sharing. Through qualitative data, such as interviews, surveys, observations, field-notes, and chat archives, they found that Skype increased learning and participation. The participant researchers noted that the benefits of Skype outweighed the frustrations from the technical issues of having to adjust the camera and speakers. They found that the face-to-face interactions provided through Skype afforded immediate feedback that would not be possible in an online session. They observed that face-to-face interactions through the use of Skype for distance students contribute to student achievement and satisfaction.

The limitations of Macharashwili and Coggin's (2013) study were that the researchers were also the participants, which made them biased, and that the sample was small. They suggested more research be conducted to determine if participating through Skype is a way students can assess knowledge. The current study will draw from Macharashwili and Coggin's study by evaluating one-on-one, student-teacher interactions to determine if Skype affects learning. Furthermore, the current study will not include the researcher and will consist of qualitative and quantitative data, which will strengthen the knowledge on the use of Skype to impact distance learners.

Yang and Chang (2008) examined the use of Skype to increase the English oral proficiency in a group of Taiwan college students over a period of 16 weeks. The

participants were divided into two groups: unstructured synchronous computer mediated communication (SCMC) comparison group and structured SCMS experimental group. In the unstructured group, students practiced speaking skills and obtained feedback from peers and instructors using Skype, without focused discussion topics. The experimental group was highly structured. Five one-hour Skype discussions occurred every 3 weeks. The Skype sessions differed each week, consisting of two question-and-answer sessions, one role-play session, one topic talk session, and one debate. The Skype sessions enabled students to practice English-speaking skills by interacting with their peers to reflect on their discussions.

The ANOVA results of the pretest and post-test scores indicated no significant differences between the two groups. Yang and Chang (2008) found through the results of students' interviews that the insignificant improvements derived from limited practice, need for an English teacher, and the way the groups responded to the discussions. The study is relevant because it attempted to increase oral proficiency in English using Skype, whereas the endeavor of the current study is to increase English composition skills via Skype. The current study may not resolve the issue of limited time for practice because it will not allow for the estimated 720 hours as suggested by Foreign Service Institute (Yang & Chang, 2008). It will, however, involve the expertise of an instructor in the area of English composition to guide and provide instant feedback to learners, which may lead to improvement. Additionally, the intent of the current study is not to design the Skype sessions according to task and content-based objectives, but to build discussions based on students' needs and experiences.

In an effort to strengthen the research skills of students studying abroad, Cohen and Burkhardt (2010) designed and implemented a synchronous librarian reference service using Skype. Champlain College, located in Vermont, had students studying abroad in Montreal and Dublin. In order to pilot test the idea, the case study focused on two librarians who were housed at Champlain, and the students who were studying abroad in Dublin. The technology librarian and the literacy librarian decided the criteria to deliver the research skills had to include video conferencing, screen sharing, be inexpensive, and be simple to install. They found that Skype met all four. Before implementing the tool, the librarians had to be sure the infrastructure for the computers at the Dublin campus allowed Skype capability and that the students knew how to use Skype. They were relieved to know that Skype was accessible on the computers at the Dublin campus and that the students were already proficient users of Skype because they used it often to communicate with family and friends at home. After getting permission, making connections with the directors, and working out the logistics, the librarians set up the first Skype-a-Librarian program for the college. Via Skype, they conducted orientation with faculty, provided students with references mostly through instant messages, and delivered library instruction to full classes using Skype's screen-sharing. The researchers found that students who use existing communication means such as email and IM were ideal for Skype. They pointed out that the success of the program resulted from their first recognizing a need for abroad students to have accessible librarian reference, and then matching it to a technological solution that would best fit the need. Booth (2010) conducted a similar study in which Skype stations were set up for

students studying abroad to access librarians for real-time research advice. Nicholson and Eva (2011) also conducted a case study of a pilot to examine the effectiveness of Skype in delivering information literacy instruction to students at a distance. Nicholson and Eva found that although Skype had some limitations as an instructional delivery, it was an effective and a useful tool for delivering information literacy instruction to distant learners.

The case study of Cohen and Burkhardt (2010) added to the documented information of Skype being used for a learning tool. It is relevant to this study because it used Skype as a tool to enable learning for students. Additionally, it provided insight into an innovative way in which Skype can be used for teaching to students at a distance. Because the outcome of the study was not discussed in terms of data, it is assumed that it is an ongoing project. Therefore, the Skype-a-Librarian project and the current study helped narrow the gap of knowledge on Skype being used as a tool for learning.

From a constructivist view, Strang (2012) investigated online business mathematics students to determine whether asynchronous or synchronous interactions affected students' grades the most. According to Strang, constructivist teaching advocates that learners leverage prior knowledge to create new ideas, understand new concepts, and construct new mental modes He agreed with Bruner that instructors should engage in Socratic methods to help learners make clarification, assumptions, and reflections. The test group, consisting of 42 students, held real-time discussions using Skype, while the control group, consisting of 39 students, took part in asynchronous discussion forums. Strang hypothesized that the Skype setting would improve students'

test results over the asynchronous discussion board forum. He used multiple quantitative measures to test the hypothesis. He reported that students who were in the synchronous Skype modality made significantly higher substantive posts during each weekly session and had final grades that were significantly higher than their counterparts in the control group who did not use Skype. Subsequently, he concluded that Skype can be used to provide quality online instruction and that universities could achieve a competitive edge by employing Skype.

Strang (2012) suggested an increased sample size and an expansion in different disciplinary subjects may reduce the limitations of his study. Because this research study is qualitative in nature, it will examine Skype's implications on improving the writing proficiency of three to five students. English composition skills in at-risk students. Although the current study did not focus on statistical grade results, it examined students' perceptions of their writing skills after interacting with the instructor via Skype. Strang applied Bruner's constructivism theory, which partly inspired this study.

Parker, Boase-Jelinek, and Herrington (2011) conducted a qualitative study to investigate how a synchronous group chat within Skype was used in a graduate level course for pre-service teachers, how students responded to it, and to what extent it led to a development of community learning. Few participants of this study used chat for addressing immediate problems and for facilitating group projects, and majority did not use chat at all, for reasons that were not established in the study. The findings were limited to low survey return, and suggestions for future research to include in-depth content analysis of communication. Though this study did not extend the suggested

content analysis derived from the use of Skype, it provides insight on the perceptions of remedial learners about their Skype interactions and the use of Skype to scaffold their English composition skills.

Chou (2012) designed a "cost-effective instructional framework to promote online asynchronous discussions" (p. 2). The framework consisting of the use of web 2.0 tools included blogging, Skype, podcasting, Facebook, and wiki. For the sake of this study, only the information of Skype will be discussed. In response to factors regarding instructor/mentor support and communication, Chou proposed that online instructors use Skype to engage in real-time discussions. The use of verbal discussions may reduce the misunderstandings caused by the text-discussion. Additionally, instructors can guide online students into the right direction if they hold weekly real-time discussions. Chou's study is important to the current study because it adds to the shortage of information and/or knowledge as it relates to the use of Skype to enhance teaching and learning online.

McCrea (2012) reported on teachers who use Skype in their classrooms. A teacher from Jonesboro, Georgia uses Skype to connect her AP literature students to outside speakers. Another teacher from Virginia use Skype to enable 75 fifth-graders to interact directly with scientists in Antarctica. Although not a study, this report provided an indication that Skype is mostly used in schools to take the place of fieldtrips.

Pan and Sullivan (2005) conducted a pilot in two online graduate courses that allowed students to use either Skype or Blackboard Chat to complete activities. Results from open questions, Skype sessions, and facilitator's feedback showed that students

benefited more from using Skype than Blackboard Chat because they were able to discuss and to gain a better understanding of abstract terms, communicate with the facilitator, and receive just-in-time feedback from the facilitator. The importance of this study is two-fold: it shows that Skype can be an effective tool to improve learning and its date is significant because it is an indicator that not many studies have been conducted on Skype since its date. Students reported that Skype enabled them to take responsibility in their learning, to stay motivated and on task, to receive instant feedback from peers and facilitators, and to develop interpersonal relationships with their online peers.

Guth and Helm (2011) conducted a study on the concept of telecollaboration in which Skype was used to analyze interactions among diverse cultures. The researchers defined telecollaboration as language learning through socially contextual rich environments, in which learning is attained through interaction and collaboration. They focused on task design to examine how telecollaboration takes into account the online environment, the tools being used, and the required literacies. Guth and Helm argued that traditional literacies are important but not enough, and therefore, it is critical to understand how to garner learner competencies in online settings. The study centered on three categories of telecollaboration tasks: exchange of information, analysis, and production. Participants included German trainee English teachers and Italian trainee English teachers. In the first section, students interviewed each other using audio and text functions of Skype. For the comparison analysis section, students discussed a news story in which they analyzed the story for audience, different media formats, text, and reader comments. They simultaneously viewed images videos and other online sources

during the Skype session. The operational section was more complex for students because the task required them to locate various online sources pertaining to their topic and share the sources using oral and text chat. They switched between the two windows, Skype and the browser. The last section required students to use Skype to use images that represented global citizenship to create a digital collage. An analysis of results from interviews showed that despite having to learn how to negotiate turn-taking, students found the audio and chat to be authentically close to having a normal conversation. Guth and Helm concluded that Skype is an effective tool to promote collaborative interactions among diverse groups. Their study provided insightful information for the current study regarding telecollaboration and socioculturalism, and use of Skype tools.

Lillie and Wygal (2011) tested the effectiveness of Skype as a "Virtual office Hours" (VOH) platform. Virtual office hours through Skype were available for two senior-level accounting courses: intermediate and auditing. Surveys were sent out to students that pertained to perceived effectiveness of virtual office hours, Skype's ease and convenience, and insights on how students compared virtual office hours to traditional office hours from other classes. In the intermediate class, only 18 of 32 students responded and 16 of 29 students responded in the auditing course. Two themes emerged from students' responses: Skype's ease of use and instructor's availability. Open-ended responses revealed that students felt a sense of caring from the professor because Skype made him more accessible and that using Skype as to communicate with the professor taught them that the tool could also be used to communicate with family and made it easy for when they would have to use it for professional reasons. This study

is important because its goal is similar to the goal of my study, which is to increase student and teacher interactions.

Stephens and Hennefer (2013) were inspired by the belief that a blended process of action learning and Skype would help students meet the challenges of learning from experience and develop adaptive competence to keep them from dropping out. They sought to determine if synchronous online face to face contact using Skype improved support and communication for nursing students overseas. Skype was also used as a medium for action learning. Action learning was carried out by students meeting on a weekly basis to discuss, reflect and review actions they took in relation to a chosen topic. Additionally, students participated in videoconferencing with facilitators in order to receive feedback and support. Focus groups and online questionnaires were used to collect data. Eighteen students were involved in the study, six used Skype to access action learning sets and all used Skype to maintain regular contact with their personal tutor. Additionally, 12 academic staff members were involved. Four themes evolved: operational issues, pastoral care, academic support, and cultural and personal development. Students rated their IT skills as excellent and good; 11 previously used Skype and all were skilled in using social media software. The academic staff rated Skype as good; only 2 of the 12 had previous experience with Skype. Overall, the study showed that students favored and preferred Skype; it allowed for instructional immediacy, contact, and interactive academic support.

Stephens and Hennefer (2013) action research study is relevant because it examined the effectiveness on Skype used as medium for communication between

students and faculty, evaluated Skype's ability to provide a supportive environment, and explored Skype's ability to provide enhancement to distance learning. Although their study was on graduate nursing students, the results can be explored and extended towards undergraduate students, especially to determine if Skype can provide a supportive learning environment that will lead towards students' growth and achievement in writing. Furthermore, my aim is the same as Stephens and Hennefer, which is to explore a tool and pedagogy that is conducive to retaining students.

Stewart, Harlow, and DeBacco (2011) conducted an ethnographic study using Skype and Google Video chat to analyze the interactions between students and their peers, and students and instructor in a hybrid graduate education class. Their study was inspired by the theory that learning is profound and significant as long as interaction at high level is maintained by either student-teacher, student-student, or student-content. However, one of the studies in their literature review claimed that student-teacher interaction had the highest value among students in higher education programs and that the other two may be maintained minimally or disregarded without demeaning the educative experience. The purpose of their study was find ways to create learning opportunities for graduate students in courses that integrated both local and distance learners through a combination of face-to-face and video-based meetings.

The study of Stewart, et al. (2011) took place in a classroom in which 14 local learners and 4 distance learners met two hours and fifty minutes for 9 weeks in a 10-week course. Cultural guides, who were local students, brought their laptops into the classroom and set up Skype or Google Video so that their distance peers were able to participate in

the classroom. The teacher included the distance learners by asking them questions, having them share their work, and by having one-on-one discussions with them. Results revealed that the distance learners interacted with other students in the class minimally, but mostly with their cultural guides and the instructor. Local learners reported that having distance learners in the classroom via technology was not intrusive and that they learned from the expertise of each of the students. In addition, they reported that although speakers were set to high volumes, they had to strain to listen when distance learners spoke, which required them to pay more attention. Distance learners reported that there were minor noise obstructions, but overall, they were able to hear what the instructor or others were saying. The study revealed three outcomes: the synchronous videoconference tools enhanced the students' educational and professional experience; videoconferencing promoted interactions between student-instructor and student-student, which led to working relationships. The researchers concluded that offering students the opportunity to engage in synchronous learning environments would enable more diversity in online higher education environments. My study can build from Stewart et al. ethnographic study in the sense that it will provide an opportunity for learners to interact with their instructor, and will strengthen the findings of Stewart et al. because it will use a case study inquiry to determine the perceptions of student/instructor interactions through Skype.

Drawing from a previous study (Eröz-Tuğa and Sadler, 2009) that examined the level of use and practical application of various computer-mediated communication tools, which included CUworld, Skype, ICQ, and Paltalk, Tuncay, Stanescu, and Keser (2010)

examined the factors that influenced student satisfaction with web-based education. They created and captured the data from a 20 item online questionnaire that they posted in two countries, Turkey and Cyprus, to over 700 students of which 495 completed and returned over a three-month period. Tucay et al. included Wiki, Skype, Plaxo, Ning, and Facebook. In both studies, Skype had the highest selection rate. Wiki came in second in Tucay et al.'s study, whereas MSN Messenger was second to Skype in Eroz-Tuga and Sadler's study. Other factors that students considered added to the quality of their online education were feedback, correct content, and clear content delivery. Results also showed that when students' needs and expectations are met, they are more prone to being content with the course and more successful at their work. The authors recommend that universities consider the needs and expectations of their students, as well as the changing roles of instructors and students in developing online learning platforms. Although this study was conducted in other countries, the favorable results of Skype inspire the current study to determine if students will find the platform helpful in meeting their needs and expectations.

The purpose of Ryobe (2009)'s study was to determine if the use of Skype motivated students' performance in oral English communication. His study consisted of 45 nonmajor elementary-level English speaking Japanese students and 10 English majors who engaged in 25-minute video chats eight times during the course with Filipino English speaking teachers in a network-based language teaching classroom. Ryobe investigated the effects of motivation and oral communication of intermediate Kyoto students who used the Linux version of Skype's voice chats. In addition, he examined

the impact of video-chat on Filipino English teachers using a 2007 Skype version for Windows. Data consisted of mixed methods from pre-posttests to DVD recorded sessions. Ryobe found that although students in the 2006 study reported high levels of enjoyment and motivation of the usefulness of Skype's voice chat, they performed much lower than those in the 2008 video chat. Comprehension of the Filipino English teachers' utterances was much higher among the 10 intermediate students, compared to the non-major, freshmen students, and so was self-expression. Overall, both freshmen and intermediate students showed improvement in listening and speaking, and were highly motivated to speak English, and speaking via Skype enabled both groups to realize the importance of learning English. This study is similar to mine in that it examined the use of Skype as a motivator to improve student learning.

The studies discussed above examined and explored the impact of Skype in various environments such as clinical settings, businesses, and medical settings. As seen from the studies above, Skype is easy to use, but may involve limitations to the number of participants the interface allows for at once. In addition, some studies showed that technical issues prevented interfered with Skype's effectiveness. The factors found in the studies above were considered while analyzing the results of this study.

Gap in Literature

The gap in the literature review suggest that were seven studies that specifically used Skype as a tool for learning anything other than teaching language as a second language. The seven studies will be discussed in detail below. The seven studies found focused on providing instruction to remote learners only. One centered on facilitating

doctoral students, another focused on teaching music through Skype, a third study used Skype as a tool to teach business math concepts to upper level students, and the last study explored the use of Skype among in-service student teachers. Other studies that centered on learning consisted of piloted librarian studies and information literacy. There were no studies found on the use of Skype to create productive interactions among student and teacher in an effort to improve the acquisition of standard written English in online remedial students.

The primary purpose of this case study was to explore the perceptions of instructors and students about the effectiveness of Skype interactions on their writing and to explore their perceptions of Skype's effectiveness as a tool to deliver scaffolding strategies to enhance the learning of underprepared remedial English composition students. The effect of interactions between instructor and students using Skype on the acquisition of writing skills of underprepared students is the phenomenon of interest. Although this study did not measure students' writing to access Skype's potential, it adds to the body of knowledge of how students' perceived their writing to have changed after Skyping with their instructors. Other than the large body of knowledge that exists regarding Skype and foreign language acquisition, little is known about how Skype is used in an academic setting with students enrolled in an online remedial composition course. A review of the literature revealed that Skype has been used in a few instructional settings (Chou, 2012; Guth & Helm, 2011; Macharaschwili & Coggin, 2013; Parker, Boaser-Jelinek, & Herrington, 2011; Stephens & Hennefer, 2013; Stewart, Harlow, & Debacco, 2011; and Strang, 2012), yet they do not include remedial students.

Therefore, a gap exists in what is known about students and instructor's perception of the effectiveness of Skype interactions to deliver scaffolding to improve the writing of underprepared college students in a developmental English composition class.

In order for colleges and distance educational programs to retain students, administrators must implement tools and strategies to satisfy the needs of the nontraditional learner. Nontraditional learners are those who are older, have children, and run their households. Some have only a GED, while others are returning to school after many years (Grimes & David, 1999). Many distance education programs and local proprietary colleges make education accessible for everyone, but they are now left with overcoming challenges of retention and providing strategies to help nontraditional students obtain the skills they need to continue. The College Board Advocacy & Policy Center (2011) pointed out that at-risk students are more likely to stay in college if they are involved in activities that require them to interact with faculty, instructors, and their peers. Although many nontraditional students do not have the time that traditional students have to get involved with extracurricular activities or academic clubs, they need some form of personal interaction to help them succeed because they tend to lack not only skillset, but also self-motivation, and self-discipline to continue (Devers, 2011). Therefore, an ancillary purpose of this case study is to determine if Skype is an effective tool for improving student's success through interactions with their instructor.

Summary

The gap in literature, as illustrated in the studies above, shows that there was a need for this study. This study may be unprecedented because at the time this study was conducted there were no studies published or unpublished found on the perceptions of underprepared students and their instructors about the impact of Skype interactions and Skype to enhance their learning of remedial English composition skills. In Chapter 3 I describe the research design, rationale for the study, and researcher role. I discuss alternative research methods and detail the qualitative procedures of the study. It also includes issues of trustworthiness and data analysis.

Chapter 3: Research Methodology

The purpose of this case study was to explore the perceptions of instructors and students about the effectiveness of Skype as a scaffolding tool for increasing academic achievement for underprepared students in an online remedial English composition course through their interactions with the instructor. One goal of this study was to determine if students' perceptions of their interactions with their instructor impacted their writing. The second goal was to determine how instructors perceived the Skype interactions impacted students' writing skills. The third goal was to ascertain an understanding of how instructors and students felt about using Skype as a scaffolding medium. Chapter 3 is organized into sections to define and describe the case study methodology and why it is being applied to this study. The first section, Research Design and Rationale, includes a presentation and explanation of the research questions, central phenomenon, and research approach. The second section, Role of the Researcher, explains my position based off of data collection and analysis to include potential biases. The Methodology section breaks down the data collection procedures, explains the selection of participants, and analyzes the data process. The Issues of Trustworthiness section focuses on credibility, transferability, dependability, conformability, and ethical procedures. A chapter summary concludes chapter 3.

Research Design and Rationale

The research questions for this study were:

1. How do students perceive changes in their writing based on Skype interactions with their instructor?

2. How do the instructors perceive changes in the writing of remedial students based on Skype interactions with students?
3. What are the perceptions of the instructors about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?
4. What are the perceptions of students about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?

The central concepts of this study include scaffolding and Skype (VoIP) with the central phenomenon of this study being the Skype interactions between students and instructor to improve developmental writing. The phenomenon and the research questions that guided this study resulted from my experience as both a ground and online writing instructor of nontraditional remedial students. In addition, my use of Skype in my doctoral program helped inspire my interest in the capability of the tool to scaffold learning. Remedial students often have a low perception of their abilities which leads to lack of motivation and ultimately to their dropping out of school (College Board Advocacy & Policy Center, 2011). I reflected on ways to interact and guide first-year online remedial students outside of the conventional classroom learning system. The participants' perceptions and experiences using Skype to interact are important to understanding the usefulness of Skype in an instructional setting with online remedial students.

A single qualitative case study was selected because it enables an examination of the phenomenon in a real-world context. Because it involves fewer participants than does a quantitative study, the data gleaned from a case study is not superficial and broad, but detailed enough to provide insight into the phenomena. A qualitative case study uses a variety of data sources to explore data through an assortment of lenses, which makes it a valuable method to develop theory, evaluate programs, and develop intervention (Yin, 2014). The research tradition for this study is a case study. Its objectives are threefold: (a) to explore how students perceive the Skype interactions with their instructor will impact their writing, (b) to explore instructors' perceptions of how the Skype interactions will impact student writing, and (c) to determine how participants feel about using Skype as a tool to improve learning. This study is also considered what Stake (1995) called an instrumental study in that it is used to gain insight or understanding of a particular phenomenon, and the insight is used to accomplish something. The perceptions of the participants of this case study will play a supporting role in helping instructors and decision-makers of distance education programs understand how Skype may be used to facilitate learning.

Yin (2014) provided four criteria for selecting a case study: (a) when the study seeks to answer "how" and "why," (b) when the behavior of the participants cannot be altered, (c) when the context in which conditions are believed to be relevant, or (d) the lines between the factors and the context are not clearly defined. Because the phenomena and the context are not easily discernible, Yin described other methodological characteristics that may become relevant as features of the case study. He explained, "A

case study copes with technically distinctive situation which will be more variables than data points, it relies on multiple sources, and it benefits from previous development of theoretical propositions to guide data collection and analysis" (p. 24).

The case study comes with many criticisms, the first of which is that it lacks rigor. Yin (2014) suggested that rigor can be increased by conducting systematic procedures and by not allowing equivocal evidence to influence the directions of the findings, which he explained to mean that researchers often allow their conclusions to be based on evidence from studies that inspired their study (p. 19). Another issue is that case study research is confused with the teaching of case studies, in which case study material is intentionally left out. Yin warned that in case study research, the researcher must work diligently to report all evidence. An inability to generalize is a third criticism of case studies. To offset the lack of generalizing, the researcher must generalize theoretical propositions because case studies do not represent a "sample." Thus the goal of the researcher "is to expand and generalize theories and not to extrapolate probabilities" (Yin, 2014, p. 8). The length of time it takes for the completion of a case study is another concern. Yin suggested alternative ways of conducting case studies rather than the use of traditional narratives. The last issue Yin explained has to do with the case study's unclear comparative advantage. He pointed out that randomized controlled trials (RTCs) became popular in the early 21st century in education because their aim was to establish effectiveness of treatments and interventions. Yin's rebuttal to this criticism is that RTCs may address effectiveness but failed to explain the *how* and the *why* a given treatment worked.

Mixed Methods

Among the many types of other methods that could have been used for this study, only the ones that would be closely related to the case study will be mentioned. A mixed-methods study was considered had the outcome of student/instructor Skype interactions on their writing been considered. This would have required that pre- and post data be gathered (Yin, 2011). The decision was made to focus on the perceptions of students and instructors on the effectiveness of Skype rather than measuring changes in student performance since isolating the impact of Skype would have been difficult.

Phenomenology

A phenomenological study emphasizes people's interpretations and experiences as subjective. The researcher must seek to comprehend the world from the participants' political, historical, and sociocultural contexts. It focuses on uniqueness or properties that are potentially applicable to other situations. This type of study would be suitable for understanding *if* and *how* Skype interactions have an impact on student learning from the point of view of the student only. Phenomenology was rejected because it requires the rejection of all predetermined research methods and their fixed procedures, which may distort an actual event (Yin, 2011). In other words, its uniqueness will not allow for transferability. A phenomenology requires extensive analysis of participants' diaries, journals, and other evidence of lived-experience over a significant period of time. Therefore, it was rejected because my participants were remote and may have moved many times, which means procuring diaries and journals was not feasible. Furthermore,

my participants were struggling writers, who may have done little to no writing outside of school and work.

A phenomenology study does not employ the use of any concepts, categories, taxonomies, or reflections about experiences, which is another reason it was rejected. This qualitative descriptive case study violates the rules of a phenomenology because it will use both instructor and student interviews to inform the subject. This study was inspired by Bruner, Vygotsky, and Siemen's foundational learning theories so a broader base of knowledge permitted by a case study is the preferred methodology.

Role of Researcher

Yin (2014) purported that in order to be a skillful researcher for a case study, one needs to be a an effective interrogator, a good listener, adaptive, knowledgeable of issues being studied, and take measures to circumvent biases. Hence, my role as a researcher was to collect data through interviews with students and instructors, listen to audio recordings, transcribe the interviews, and finally put all information together by identifying themes and patterns that emerged from the interviews. I also transcribed twelve conversations between both instructors and each of their three students, and then analyzed them for themes and patterns. I had no personal or professional relationship with any of the participants. Bias was avoided by following ethical procedures and by being open to contrary evidence. As Yin suggested (2014), I kept a reflexive journal and used bracketing to identify my biases. Furthermore, my responsibility as a researcher was to make sure my information was accurate, credible, scholarly, and void of

deception. Other ethical issues, such as protecting participants, were avoided by following IRB protocol and procedures.

The process began by obtaining a Letter of Cooperation from the Dean of the University (see Appendix B). Then I obtained IRB approval to approach my participants. Once approval was granted, I emailed instructors invitation letters to participate in the study. The invitation letters contained an overview of the study (see appendix C). Within a week and a half, two instructors replied with interest to participate. After their positive responses, I emailed them consent forms to participate in the study (see appendix D). After I obtained their consent to participate, the two instructors emailed me their class roster. I sent their students an invitation to participate in the study (see appendix E). After a few days, students began to respond with interest. I selected the first three students who responded from each of the instructor's classes, and then I sent them student consent letters (see appendix F). After all student consent forms were returned, the study began. I established rapport with instructor participants by meeting with them to discuss the logistics of the study and to answer any questions. During the individual meetings with the instructors, I helped them to install Skype mp3 recording software on their computers and exchanged Skype contact information to allow us another option for communicating and to test the Skype recording software. Data were collected from two instructor interviews (see Appendix G for Instructor Interview Protocol), six student interviews (see Appendix H for Student Interview Protocol), and from two standardly held instructor-student Skype sessions that were recorded, which totaled 12 Skype session recordings. Instructors kept the audio files on their computers

and emailed me a copy of each session. As soon as data came in, it was coded, analyzed, and transcribed at least three times to help identify themes and patterns from the Skype sessions and the interviews.

Methodology

An extensive literature review validates that Skype is rarely used to provide academic guidance outside of teaching a second language. Therefore, this case study represents an unusual case, which not only enhances the knowledge of Skype's ability to be used for academic institutions of higher education, but also provides an in-depth description of this phenomenon. Furthermore, the research questions require more probing since they are of the "how" nature because they focus on how students perceive their writings as a result of Skype tutorial sessions, how students feel about Skype, and how the instructors feels about Skype (Yin, 2014).

Participant Selection Logic

Purposeful sampling of participants was used. Course requirements determined the participant pool. The university required online students and instructors to hold Skype communications at least twice during each term. Student participants were self-screened into the course because of their scores on the entrance exam, which was required and administered by the university called *ACT Compass* placement test. This study consisted of two local online instructors who taught remedial English composition courses both online and on-ground and six online students, three per instructor. The Dean of the university granted permission to conduct the study and following IRB approval, provided me with a list of instructor names and email addresses. Emails were

sent to each instructor that included a description of the study and two preliminary conditions: a) must be available and or scheduled to teach an online remedial English composition class in the upcoming mini-term, and b) must use Skype routinely to communicate with students. The first two instructors who responded favorably to the invitation were sent consent forms. Both instructor participants were adjunct, who worked at the university approximately 5 years and taught English composition for the university, which held ground and online courses.

Although students were automatically eligible to be part of the study, their participation was voluntary. One online remedial English composition course consisted of 15 students, and the other included 17. Student participants were selected based on the first three favorable responses to the invitation. Student participants were nontraditional adult students who were enrolled full time in an online college and taking a required remedial English composition class. In order to understand the student participant pool, an explanation of the university's requirement is necessary. The university administers the *ACT Compass* exam to all incoming freshmen students. Those who score below a certain percentage in reading and math are required to take non-credit bearing English and/or math classes, also known as remedial.

The Skype sessions were routine and already established as these instructors' instructional style. Each provided me with audio files of two of their recorded conversations with each of the three students who agreed to be in the study. Although a larger number is commonly thought to better, as Yin (2011) pointed out, qualitative studies do not have a required number of participants. Ideally, two instructors and their

entire student body would have led to greater findings. However, two instructors and six students were enough to create the depth needed to write a rich, descriptive narrative. Interviews with the eight participants created eight units of data; two recorded Skype sessions between each participant and the course instructors added 12 more units. The number of units to analyze resulted in 20, which was substantive enough to write an in-depth interpretive analysis.

Yin (2011) suggested providing a small gift, such as a $5 gift certificate to compensate participants for their time. While it is commendable to offer some type of appreciation for participation, doing so may have resulted in contrived actions by participants. Therefore, they were not compensated or awarded for their participation in this study. However, the dean and each participant were sent thank-you letters and invited to read a two-page summary of the study's results.

Sampling. Though it appears that the students could be considered a convenience sampling because they were required to take the course, they mostly fall under purposive sampling. Purposive sampling was to select the participants. Purposive sampling occurs when units are selected because they provide the most relevant and plentiful data (Yin, 2011). The instructors and their students were selected because they fulfilled the purpose of this study. The instructors voluntarily followed the university's liberal requirement to use Skype on a regular basis with their students and the students were placed in the online remedial English class because of their score on the *ACT Compass* entrance exam. Three students who were the first to respond favorably from each instructor's class were selected to participate. The instructors were selected because they were the first two to

respond favorably to the invitation and to meet the preliminary criteria, which confirmed their ability to participate in the study.

Yin (2014) explained that depth is not gained by the number of cases or participants, but by the quality and quantity of methods used. One interview with both instructors and each student participant, and two recorded Skype conversations between the instructor and each student were analyzed. Due to technical glitches, six follow-up questions were Skyped- messaged and emailed to the instructors. Saturation was established from a small group of participants to gain detailed, rather than superficial data. Detailed data were gleaned from the transcriptions of the interviews and conversations with the instructor and students used in the study.

Instrumentation and Procedures

Three sources of data were collected for the study: Two instructor interviews, one interview with each of six students, and two Skype audio recordings between the instructor and each student, using software called Skype mp3 Recorder, for a total of twenty sessions. As Yin (2011) pointed out, written notes from the interviews will serve a casual role, but the recordings will serve as actual data. Students participating in the study were required by the university to take the remedial English Composition course because of their placement on the university's placement exam, *ACT.* The online course runs for 6 weeks. Prior to the course's beginning, students were required to take a four-hour on-ground orientation in which they were informed of the logistics and requirements of the online course, taught how to navigate through the course platform, and how to set up Skype. During the orientation, students read and signed a form that they would Skype

with the instructor for at least 20 to 40 minutes every other week or attend one-hour face-to-face tutorial sessions at a local campus.

Structured interview questions (see appendix A) were open-ended to allow for more detail and a more accurate inference of participants' experience (Yin, 2014). Instructors were given the option to Skype or use some other form of synchronous communication, but they were not required to make audio recordings of the sessions; the universities liberal policy required that instructors provide only the time and name of the students they Skyped. Therefore, audio recordings, although not officially conducted, is the property of the school. Themes were searched for throughout interview transcriptions and audio recordings. After the interview, students and instructor exited the study by being thanked for their time and with an invitation to have access to their contribution to the study. Coding was utilized for patterns of data pertaining to students and instructor affective comments from interviews. Audio recordings picked up on specific strategies and missed or overlooked data.

Data Analysis Plan

Yin (2011) stated that the nature of a case study is an interpretation of subjects that have not been systematically examined to aim at conclusions or common lessons, which can be used for further studies. Yin suggested checking and rechecking data for accuracy, making analysis thorough and complete, and continually acknowledging bias helped to maintain rigor. Therefore, to ensure the accuracy of thematic interpretations, interview questions were thoughtfully created with the help of expert researchers on my committee. Thematic interpretations were systematically checked for consistency and

accuracy by listening repeatedly to the audio recordings, and by writing and rewriting the transcripts from the Skype sessions and the interviews. The themes were discussed according to the research questions they were associated with.

My data analysis process began, as Yin (2011) suggested, at the onset of the study because memos were used to help me stay alert to negative situations and to pose questions about data. Yin stated that the analysis process consists of compiling, disassembling, reassembling, interpreting, and concluding. Therefore, I compiled and sorted through memos, field notes, audio files of Skype, audio files of interviews, and transcriptions to create a database for systematic order and to generalize categories. Secondly, I repeatedly disassembled data by breaking down compiled data into smaller pieces to allow for trial and error and to test for patterns. Responses to interview questions were organized for comparison and placed into a matrix. Data from interviews, memos, field notes, audio files, and transcriptions were then reassembled to help recognize codes or themes. Although Yin suggested that a software program is not necessary because the researcher is still tasked with coding the results efficiently, I downloaded the software *ATLAS-si5* to help organize and store data. After a few attempts to use the software I discovered Yin was right, so I abandoned it because I feared that my inexperience with it would yield unreliable, inaccurate information. I sought the expert help of my chairperson to demonstrate the process of creating themes. Working manually with the data allowed a deeper understanding and more familiarity. The patterns and themes gleaned from reassembling were then used to create a rich, descriptive narrative that included relevant tables. Lastly, conclusions of the study were

drawn. The process was recursive, and therefore, to address biases, to attain actual depictions of participants' experiences, and to ensure patterns and themes were not overlooked, many steps were repeated.

Yin (2011) stated researchers should remain skeptical and suggested that discrepant evidence requires the researcher to undertake a methodic demeanor throughout the entirety of the study, and to employ more than one specific practice. Member checking was included to attain accuracy and clarification. Before the final interpretative narrative was written, participants were encouraged to read their contributions and add any insight they may have had, including that I make changes to my interpretations if needed. Another strategy was to have follow-up interviews that focused on specific missing or fragmented information or to have Skype conversations with participants regarding rival information, without directly mentioning it as such. Field notes were recorded in my research journal, which were rechecked to identify and diminish bias. Triangulation of data from student interviews, instructor interviews, and audio recordings mitigated rivals.

Issues of Trustworthiness

Yin (2014) suggested the use of four logical tests be used to judge the quality of designs: construct validity, internal validity, external validity, and reliability. Shenton (2013 pdf) paired traditional and alternative criteria for testing trustworthiness: "Internal validity and credibility; external validity and transferability; and objectivity and confirmability" (p. 2). Because this is a qualitative study, in which researcher's interpretations and biases may interfere with actual findings (Yin, 2011) credibility,

transferability, dependability, and confirmability will be used to address issues of trustworthiness.

Credibility. Data gathered from student interviews, instructor interviews, and audio recordings of sessions resulted in triangulation collecting to establish credibility. Yin (2011) recommended that researchers establish credibility by being transparent. Therefore, research procedures were described and documented to allow others to analyze it and apply it to similar environments. Because participants self-reported, corroboration of evidence between participants helped to add to the study's credibility. Interview questions were formed by a consensus of two expert members of my committee and me, and the final draft of the interview questions were reviewed and approved by IRB. Member checking is a technique in which participants have the authority to access and assess information for accuracy. Yin (2013) stated that member-checking is an important strategy to ensure validity and credibility in what the researcher perceived to be true and what members consider to be truths.

Transferability. Yin (2011) explained a descriptive case study to be one that describes an intervention or phenomenon and the actual context in which it occurred. Therefore, in order for this case study to be used and/or tested by future researchers, it was written so that it transfers to similar contexts for continual study. Transferability was established by writing a rich, detailed description of the case. The final narrative resulted from the use of various data sources that acted as a variety of lens to understand and reveal multiple facets of the phenomenon (Yin, 2011). To offset inconsistency, the researcher captured the experiences of the participants through triangulation of data:

audio recordings, student interviews, and instructor interview. Follow-up interviews were planned to confirm missing or new information gleaned from coding and transcribing data sources. However, due to time constraints created by the one-week break between the terms, follow-up interviews were not conducted. Instead, participants gave me permission to email them regarding any fragmented or missing information that may have resulted due to technical issues.

Dependability. Case studies explore a phenomenon or event in actual context to derive at an analytical conclusion. In doing so, it involves the use of multiple data instruments to help write a comprehensive, detailed description of the case so that a reader can feel as though he or she was a part of the study and can decide if it can be applied to his or her situation (Yin, 2011). Dependability was gained through the use of three pieces of evidence: instructor interviews, students' interviews, and audio recordings of Skype sessions. Double-coding was conducted by coding, waiting a period of time, and recoding to allow for consistency and dependability because it permitted the researcher to compare in order to reduce discrepant information (Yin, 2011).

Confirmability. The researcher must be objective and employ strategies to mitigate biases and personal interpretations, which will skew the true findings of the phenomenon under study (Yin, 2011). Although triangulation and member check were used to confirm the study, assumptions and biases might have played a part in the analysis of data sources. To offset bias, faulty interpretation, and assumptions, Yin suggested that researchers use bracketing. Therefore, a reflexive journal with my pre-existing beliefs, knowledge, goals, and emotions, and assumptions was used from

beginning to end of the study. Such journal allowed me to maintain a reflexive stance. Steps were also taken to organize and store data in order to code and report emerging themes and to identify and report patterns. Data audits were systematically conducted and prolonged exposure in the field enabled the researcher to build a rapport in order to make peer corroboration techniques unobtrusive (Yin, 2011).

Ethical Procedures

Yin (2011) advised that a researcher's first responsibility is to have a strong sense of ethics because of the many discretionary choices that must be made. Though not exhaustive, Yin presented many ethical factors to consider. Researchers have a responsibility to participants and to the field relating to their study. Ethical dilemmas must be anticipated and misrepresentation and deception must be avoided. Findings must be reported to all stakeholders, and disclosure of all data, procedures, methods, and bias must be made available for other researchers to understand and interpret. Lastly, researchers must divulge diversity of interest and values of participants that may not align with their preconceptions.

Researchers must maintain research integrity. Integrity involves the presenting of truthful information and the willingness to be proven wrong. Disclosure of conditions that may affect the conduction of the study is an integral part of ethical procedures. Disclosure goes beyond the methodological conditions and outcomes; it includes any traits and personal roles of the researcher that may impact the outcome of the study. Additionally, researchers need to disclose any affiliation to the participants and advocacy

role. Yin suggested that researchers use a research journal to report reflexivity, which he defined as "the interactive effects between researcher and participants" (2011, p. 43).

Handling of ethical risks. This study did not pose any unusual risks to participants because they were not part of any treatment; rather they acted in their everyday roles (Yin, 2011) of online college students. A Letter of Cooperation signed by the dean was obtained (See Appendix B). Participation by the instructor and students was voluntary. Although students were required by the institution to hold Skype sessions with the instructor, they were not required to remain part of the study and could have discontinued at any time without question. This information was included in a signed consent letter for each participant.

Ethical concerns of recruitment and adverse actions. There were no ethical concerns relating to recruitment because the course included the use of Skype by students as a course requirement. However, they were still given the option to decline participating and/or withdraw from the study at any time, with no consequences or questions asked. Their dean or instructor will not have been told if a participant chose to withdraw from the study. To avoid the issue, students received and signed a consent form, which fully explained voluntary participation. Students withdrawing from the study, falling short of the planned Skype sessions, refusing to participate in the interview, or refusing to be recorded would have had an adverse effect on the study. However, to remain ethical and uphold integrity, if any adverse actions occurred, they would have been all recorded truthfully and would have been written in the findings and conclusions. Institutional permissions, including Walden's IRB approvals were obtained before I

approached the instructor or students to participate in this study. The approval number granted by Walden's IRB is 07-28-14-0028028, which expires on July 27, 2015.

Data handling. Data were gathered from three artifacts: audio recordings, student interviews, and instructor interview. To ensure that the study upheld its integrity, audio recordings were systematically checked and edited to erase any names that may have been recorded. Additionally, audio recordings were used to search for themes. The researcher audited the audio recordings. During the write up of the narrative, participants' names were omitted and pseudonyms were used but their responses were documented for public analysis. Interviews were open-ended and recorded to ensure the researcher captured accurate details and themes.

Recordings of the conversations between the instructor and students were be stored on the instructor's laptop and transferred to me at the end of each session for analysis. I stored the audio data on a memory drive that will be kept in a locked cabinet in my home and on my password protected laptop. I will keep the data on the memory drive in a locked cabinet in my home for five years, after which it will be destroyed. If participants request a copy of their recordings, they will be referred to the dean to obtain a copy since the recordings are the property of the college.

Incentives. Participants were not offered incentives. Instead, the participants, along with the dean, were invited to read a two-page summary of the study, and a formal letter of appreciation was sent. Participants will exit the study by receiving a formal letter of appreciation for volunteering to take part in the study.

Summary

Chapter 3 included a statement of the purpose of this case study, research questions, and background for the case. A rationale for the research design was discussed which included a discussion of other research methods I considered for this study. A discussion of the researcher's role provided transparency of the researcher's pre-existing knowledge and overall connection to the study. The methodology discussion included participation logic, instrumentation and procedures, and issues of trustworthiness.

Chapter 4 includes a discussion of the findings of this study. The setting of the study is described in terms of conditions that influenced participants and their experiences that informed influential interpretations. Next, a description of participants' demographics and characteristics that were relevant to the study is discussed. The data collection section includes the number of participants, location, frequency, and duration of data collection. In the data analysis section I report and describe processes and emerged themes from the study. This will be followed by a thorough explanation and description of evidence of trustworthiness, which will include credibility, transferability, dependability, and confirmability. The results section addresses each research question, presents data to support finding, and discusses discrepant cases. Finally, summarized results are provided for each research question.

Chapter 4: Findings

The purpose of this case study was to explore the perceptions of instructors and students about the effectiveness of Skype as a scaffolding tool for increasing academic achievement for underprepared students in online remedial English composition courses through interactions with their instructor. One goal was to determine students' perceptions of how their Skype interactions with their instructor impacted their writing. A second goal was to determine if students and instructors found Skype to be a useful medium for delivering effective scaffolding. The data were collected using 12 audio-recorded Skype sessions, 2 instructor interviews, and 6 student interviews (see Appendix A for Interview Questions). Analysis of the data consisted of the identification of codes, themes, and patterns using open coding for each of the four research questions below.

Research Questions

1. How do students perceive changes in their writing based on Skype interactions with their instructor?
2. How do instructors perceive changes in the writing of remedial students based on Skype interactions with students?
3. What are the perceptions of the instructors about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?
4. What are the perceptions of students about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?

The introduction included the purpose and research questions, followed by a description of the study's setting. Participant demographics and characteristics are described. Data collection is described in detail, followed by a comprehensive analysis, and a discussion of trustworthiness. A discussion of this case study's results is organized around the four research questions.

Setting

This study took place over a 6-week period in synchronous virtual environments as components of two asynchronous online remedial English composition courses that were part of the writing curriculum at a four-year university. The university also offered campus-based courses in cities across the United States. It required online remedial students to participate in synchronous communication with their instructor at least twice during a 6-week miniterm or to attend two 1-hour nearby face-to-face workshops with a tutor. Academic advisors coordinated the face-to-face workshops for students who preferred that forum, and once they met the obligation sent notification to their instructors that they had fulfilled the requirement. Though the university had provided and offered three ways for instructors to hold synchronous instructional communications with their students, it had "relaxed requirements" as one instructor informed. The options included 30-minute bi-weekly phone calls, at least one 30-minute Skype session per student, or three 60-minute live group conferences. A combination of any of these requirements could be used as long as instructors enabled students to fulfill the two-session requirement. The university did not include a complex logging system for synchronous

communication; rather documenting times of Skype sessions was part of remedial instructors' contract. Skype was embedded in the university's learning management system (LMS) as was a similar web-conference tool called Big Blue Button. The two classes in this study implemented two 30-minute Skype sessions to help students meet their obligation. Therefore, students who took part in the study automatically met the requirements of the study: they were self-screened into the remedial English Composition class because of the University's entrance requirement of the placement exam and because their instructor used Skype.

The university included Skype in its learning management system (LMS) as an optional tool for instructors to use for communicating with their students. Finding two instructors who used Skype routinely was an initial issue. However, after discussing my proposal with various campus directors and deans, I was referred to a possible site. Following a two and a half week period, I obtained written permission from the Dean to conduct the study. After attaining IRB's approval, the Dean provided a faculty roster that included their email addresses. Invitation emails were sent to all English composition instructors who also taught online. The instructors were told in the letter that they had to meet two conditions: (a) they were scheduled to teach an online remedial English Composition course in an upcoming term, and (b) they used Skype routinely to communicate with their online students. The fifth day into the first week of the invitation letter, one instructor responded positively, and exactly a week after the invitation emails were sent, another instructors responded. Two other instructors responded after a week and a half. Although only two instructors were needed for the study, no instructors were

turned away until it was clear that the most important condition be met: At least three students in an instructor's class needed to respond favorably to the invitation. Invitation letters were sent to the students of the first two instructors who responded, but only one had three students respond favorably. The second instructor had only one student response and after a week, I sent out invitations to the students of the other two instructors. Of the two instructors, one had four students respond, and the other had no responses. Therefore, I invited the two instructors who had met the number of student respondents. After the invitation letters were returned from the potential participants, consent forms were sent. This resulted in two instructor participants and six students, for one did not return the consent letter because he withdrew from the course. After the instructors were official participants, by way of procedure, I arranged a 45 minute meeting with them to discuss the logistics of the study, to ensure that mp3 Skype recorder installed on their computers was functioning correctly, and to discuss back-up recording strategies. Later that evening, we did a 10-minute Skype practice session.

Demographics

The demographics most relevant to this study are that all students were online, nontraditional, first-generation college enrollees of either a two-year associate degree program or a four-year bachelor degree program, who were enrolled in a remedial English Composition course. The students ranged in age between 22 and 51. Jennie was 22, had a GED, and attended a ground university and an online program previously. Carla was 34 and a daycare teacher for 11 years. Carol was 38, and was recently laid off from her job as a retail manager where she had worked for 12 years. Janice was 45 and owned

a personal care home for six years. John was 47, retired from the military, owned a lawn service, and attended an online program in the past. Carrie was 51, retired from the military, and worked as a prison guard. Their scores on the university's placement exam, *ACT*, required that they take a remedial English composition class. Pseudonyms were assigned to each participant to guarantee anonymity (see Table 1). Student participants were assigned names that began with the first letter of their instructor's pseudonym. For instance, the names of Ms. Jones's students began with the letter J, and the names of Ms. Carter's students were given names that began with the letter C.

Table 1

Demographics of Student Participants

Interviewee	**Gender**	**Age**	**Program**
John	M	47	Bachelor of Science in Information Systems
Jennie	F	22	Undecided
Janice	F	45	Associate of Arts in Accounting
Carla	F	34	Bachelor of Science in Criminal Justice
Carol	F	38	Bachelor of Science in Business Administration
Carrie	F	51	Bachelor of Science in Business Administration

The instructor participants were also nontraditional. They were adjuncts who taught both online and on-ground courses for the university. One instructor was a retired high school teacher, who had taught at the university since 2005 and online since 2011.

The other instructor was a current media specialist at a local high school, who had taught both on-ground and online for the university since 2010. The retired instructor was acclimated with Skype because of her past experience of teaching ESOL via Skype to foreign students. The media specialist was skilled at using Skype because of her training and profession. The two instructors were also given pseudonyms: Ms. Carter and Ms. Jones. This study was comprised of eight participants: two instructors and three students per instructor.

Data Collection

This qualitative case study included six students and two instructors. The three points of data collection produced12 recorded Skype student/instructor sessions and eight interviews. Each instructor made two recordings of their Skype sessions with each of their three students, during the six-week term, resulting in 12 mp3 Skype recorded sessions. One interview with each of six students and two instructors yielded eight interviews. Student interviews took place via Skype during the last week of the term, week six and lasted between 50 to 60 minutes. Both instructors agreed to meet me at the conclusion of the study, on the same day but at different times. Before conducting the interviews, I turned on both of my recording devices: A mini digital recorder and the Audio Recorder Plus Pro on my Apple iPhone. The interview with Ms. Carter took place on the local campus in an empty classroom and lasted 78 minutes. Two hours later, Ms. Jones and I met for an interview in the faculty lounge in the early afternoon, when others were least likely to be around. The interview with Ms. Jones lasted 72 minutes. The interviews and recorded Skype sessions resulted in 20 pieces of data. Data from the

Skype sessions were emailed to me in Skype mp3 files. As each piece of data came in, I listened to it carefully, took notes in my research journal, searched for possible themes, and sent the mp3 files through *Nuance Dragon Dictate for Mac.* Interviews with the six students took place via Skype and were recorded using Skype mp3 recorder and an App on my iPhone called Audio Recorder Plus Pro and a Sony a mini-digital recorder.

Variations in data collection included member checking, recording device, and transcribing software. Instead of using *ATLAS-si5* to organize and store data, I organized my data manually because extra time would have been needed to familiarize myself with the software before I was able to use it efficiently. I organized data strategically and stored the organized files on my computer and on an external hard drive. *Nuance Dragon Dictate for Mac* was used to transcribe the two face-to-face interviews with the instructors. The recording device that changed was an App on my iPhone. The initial free version of the App proved not reliable during the testing of my equipment. I transcribed the 12 Skype sessions manually by listening repeatedly to the emailed audio files of the Skype mp3 recordings. Transcriptions of students' interviews were obtained from three recording devices: The Skype mp3 recorder, a Sony digital mini recorder, and the Audio Recorder Plus Pro. Each device was listened to repeatedly to ensure accuracy and to capture the participants' words, utterances, and voice inflections to create verbatim transcriptions. Instructor interviews were transcribed from a Sony mini-digital recorder as well as the App on my iPhone, Audio Recorder Pro. Both devices were listened to repeatedly and transcriptions were made first using *Nuance Dragon Dictate for Mac and*

checked and revised manually to capture the exact words, utterances, and voice inflections from the interviews.

Data Analysis

A set of interview questions was prearranged for both teacher and student participants, but the results from the themes and patterns pulled from the class Skype conversations helped to create more probing and follow-up interview questions. As the first three audio recordings of the Skype sessions were emailed to me, I listened to them and sent them through transcription software called *Nuance Dragon Dictate for Mac.* After the transcriptions were complete, I read the transcriptions as I listened to the recordings to ensure accuracy. Many mistakes were discovered from the software transcriptions, especially in instances where the instructor and student voices overlapped or when they talked simultaneously. The software could not discern the content of more than one voice at a time. This resulted in my distrust of the software and made me transcribe the remaining Skype recordings manually. *Nuance Dragon Dictate for Mac* was used to transcribe my interviews. However, I compared the recordings and the transcriptions numerous times to ensure accuracy. Only minor editing was needed.

To begin coding, I used the first transcript created from the first Skype recorded session that I received. I placed the four research questions at the top of its page and assigned colors to each question. Next, I created phrasal codes based on the four questions. The four codes were as follows: Students' perceptions of changes in their writing due to interactions with the instructor; Instructors' perceptions of changes in students writing due to interactions with students; Instructors' perception of Skype's

effectiveness to scaffold; and Students' perceptions of Skype's effectiveness to guide their learning. Later, I read over the transcript and color-coded each line that matched the codes.

After reading and rereading the color-coded transcript, I was able to identify themes. I made notations outside the margins beside each script that I thought were emergent themes. To keep track of the themes, I made a table of them that included abbreviations. As other audio files came in and were transcribed, I looked for patterns of the themes from the first transcript, and using the abbreviations I created, marked each line of script accordingly, adding new themes as they emerged. I waited a few more days and reread each line of the transcript as well as my notations to see if they indeed made sense and if any new themes were found. This was done for each transcription of Skype conversations and later for interview transcriptions. The codes, themes, and patterns were recorded inside my field notebook, which included definitions of some themes. After the themes and patterns were finalized, I revised my interview questions to allow for saturation of information and to confirm my interpretations. Themes and patterns from the Skype conversations were confirmed by the interviews and provided the insight into the four research questions. One discrepant case was identified.

Evidence of Trustworthiness

Qualitative studies rely on rich descriptions and narratives that center on themes. A qualitative study relies on the voice and perceptions of its participants, and the researcher must be careful to address issues of trustworthiness by analyzing the study for credibility, transferability, dependability, and confirmability (Yin, 2011). Triangulation,

themes, coding, and data collection were used to help provide evidence of trustworthiness.

Credibility

As data were collected, they were examined closely to ensure internal validity (Miles & Huberman, 1994). Transparency was established by fully describing and documenting research procedures (Yin, 2011). A compilation of data from transcripts of Skype sessions, student interviews, and instructor interviews created triangulation that helped to corroborate evidence among participants. Research and interview questions were produced from a consensus of two experts from my committee. In addition, the final draft of the research and interview questions were reviewed and approved by IRB before the study began. Member checking was the only strategy that was not carried out as initially planned. It was not used because there were no discrepancies among the sources and to avoid placing a burden on participants since they had one week before the start of the next term.

Transferability

Transferability was carried out by a description of the actual context in which the study took place (Yin, 2011). A description of the participants' demographics also helped to establish transferability. The results of this study are not unique to a time-period. The study included rich descriptors for evidence of transferability. Each participant's responses were included and described fully to allow transferability to be explored. The student participants included two male and four females, and the two instructor participants were both females. Others who are considering implementing Skype in their

courses can review my results to determine if they are transferable to their contexts and participants.

Dependability

Dependability was addressed by the use of multiple data instruments: transcriptions of Skype sessions, student interviews, and instructor interviews. Data were coded, analyzed repeatedly, and recoded. Recordings were listened to repeatedly to ensure the accuracy of the transcripts. The analysis was based upon the actual voices of the participants to help explore their perceptions and to build trustworthiness.

Confirmability

Confirmability was addressed by keeping a reflexive journal. The journal included my biases and interpretations in brackets, as well as my reflections on the trials and tribulations of sorting, organizing, and storing data. Data were systematically collected, and my exposure in the field, although somewhat unobtrusive (Yin, 2011), was important in helping to establish confirmability. IRB required that I provide the contact information of myself and that of a Walden IRB board member to participants in the event they had questions or wanted to opt out of the study. Meeting with instructors prior to the study confirmed the results. The meetings helped to ensure that a Skype mp3 recorder was installed and functioning properly and that they use a backup recording device, such as the one already on instructors' computers, that they use a backup recording device, such as the one already installed on their computer, and that they used a secondary used a secondary backup recording device external to their computer. In addition, the email exchange between the instructors and me confirmed trustworthiness.

Results were confirmed from a triangulation of data units: transcripts of Skype sessions, student interviews, and instructor interviews. I was the sole researcher, and I executed the study as planned.

Results

Due to the increase in enrollment of nontraditional students and the threat of limiting or doing away with financial aid and student loans, universities strive to find ways to meet federal mandates. The results of this study may help online universities find an alternative solution to address the needs of its growing population of underprepared students. This study was conducted to analyze and explore the perceptions of online remedial students and their instructors as they interacted through Skype to develop their writing skills. The research questions were explored through the lens of three sources of data: Transcriptions from six audio-recorded student-instructor Skype sessions, six student interviews, and two instructor interviews. Some themes were different for each research question, while others were overlapping. The themes are arranged according to the four interview questions.

Themes emerged from interview questions and Skype session transcripts. Interview questions were the same for students and instructors. The audio recordings of the Skype sessions were screened initially to support the themes already discovered from the transcribed Skype interactions. Additionally, the audio files were analyzed again after patterns formed from the interviews to cross-reference and confirm the emergence of themes. Students helped contribute to the emergence of themes that resulted for Research Questions 2 and 3, which centered on the instructors. Likewise, the instructors

helped to confirm the themes for Research Questions 1 and 4, which centered on the students. Table 2 shows how the themes were organized to inform the results of the research questions.

Table 2

Themes Organized by Research Questions

Research Question	Themes Emerged from Instructors	Themes Emerged from Students
How do students perceive changes in their writing based on Skype interactions with their instructor?		Skill acquisition, gained confidence, and reinforcement
How do instructors perceive changes in the writing of remedial students based on the Skype interactions with students?	Skill acquisition, self-regulation, and critical thinking	
What are the perceptions of instructors about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?	Ease of use, rapport, and indispensableness	
What are the perceptions of students about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?		Ease of use, value, real-time learning, and rapport

Research Question 1: How do students perceive changes in their writing based on Skype interactions with their instructor?

Students were asked if they noticed some type of change in their writing, to describe how their writing changed, and to explain how interacting with the instructor through Skype might have influenced changes. The interactions between students and their instructor were on an instructional level, and therefore, considered scaffolding. According to Bruner, scaffolding supports learner attention, motivates, identifies relevant tasks, controls for frustration, and advocates for self-construction (1960). Vygotsky's (1987) zone of proximal development serves as a tool for interpreting the results because students perceived development in their writing because of their interactions with a more skilled and intellectual person in the discipline, the instructors. Siemens (2005) argued that learning occurs when learners see connections between ideas and when they realize that new information has changed their attitude. Themes that emerged for research question 1 were skill acquisition, gained confidence, and reinforcement.

Skill acquisition. Skill acquisition is the ability to solve intellectual problems. It involves moving from one stage to another until a solution is found. The process requires students to make choices out of uncertainties (VanLehn, 1996). Student participants were aware of their writing ability before and after the Skype conversations with their instructors. I started the interview process casually to get participants comfortable. I

opened with a warm greeting and I asked how they felt about their writing. Carol admitted, “I can’t write that good.” Carrie said, “My writing ain’t that good.” Carla informed, “I know it can be better, but I don’t really have a reason to write.” Janice stated, “Writing is not something I enjoy cause I have such a hard time.” Jenny said, “I can use some brushing up on my writing.” John stated, “Don’t like it. Can’t do it!” Each of the student participants recognized that they needed to develop their writing skills.

In response to the interview question: Do you perceive some kind of change in your writing this term, Carol said, “I think my writing has changed a lot.” She described how her writing changed, “I have sentence sense now. Didn’t know what that meant before, but I understand that my sentences were not making sense because I had a lot of fragments and wasn’t punctuating right.” Carrie stated, “It may not have changed too much, but I finally understand what is meant by subject and verb agreement.” Carla informed, “I actually go through the writing process now and it is easier to write, so it changed a lot.” John exclaimed, “I’ll say it changed somewhat because I used to have a hard time writing a thesis and supporting it.” Janice said, “It is more organized because I know how to support my thesis statement.” Jenny’s response was inconsistent with the rest, “I didn’t notice no changes.” With the exception of one student, the comments from students confirmed that it can be interpreted that students’ Skype interactions with their instructor led to the acquisition of skill or knowledge.

Scaffolding occurred through Skype conversations and provided immediacy for knowledge to develop (Siemens, 2006). Four of the six students spoke specifically about what they acquired through the Skype conversations with their instructor. Carol spoke

candidly, “I have sentence sense now because I understand how parts of a sentence must come together to make my point clear.” Carrie explained, “I finally understand what is meant by subject and verb agreement.” Janice said, “I actually go through the writing process now and my papers come out better.” Carla proudly exclaimed, “I used to have a hard time writing a thesis and supporting it. Ms. Carter showed me the three point method and now it is easy to write essays because I just explain the three points of my thesis in the body of my paper.” John was less specific about what he learned; he claimed, “I just learned a lot and now I write better.” Jenny’s response was inconsistent with the others, “I didn’t notice no changes.”

The excerpt below is an example of how one student transitioned from not recognizing fragments, run-ons, and when to use capitalization correctly to understanding how to write a coherent essay:

> Carol: “Here you wrote that I need to improve sentence sense because I have fragments and awkward sentences and you highlighted these sentences, but I still don’t see why they are choppy.”
>
> Ms. Carter: “Having sentence sense means that you automatically know where a sentence begins, ends, and how to develop one. It helps you recognize when you have fragments and run-ons, and even unclear or poorly structured sentences. One way to help improve sentence sense is to always read your writing aloud after you feel like you are finished. Start with the paragraph with the yellow highlight.”
>
> Carol: “You want me to read the whole paragraph?”

Ms. Carter*:* "Yes, please."

Carol: "Okay. McDonalds and Burger King have a lot in common but also a lot not in common. McDonalds is all over the world. Burger King is not. McDonalds have a double lane drive thru. Burger King have a single lane. McDonalds have a healty—that's supposed to be healthy—menu. With Salads and stuff, whereas Burger King don't have nothing healthy. The meet is..."

Ms. Carter interrupts: "Is that the correct spelling for that word?"

Carol: "Oh, you right. The m-e-a-t, meat is the same at both places. Not reel—I need to correct that to r-e-a-l. They cook the food [pauses] it just sits there til somebody comes to buy it. It is nasty. Which is why whenever I go past one. I don't stop I don't care how much my kids beg me. Sometimes we go hungry. Driving around looking for something to eat other then Micky D's and Burger King."

Ms. Carter: "See you already found some errors while reading. Now those that you won't find are capitalization errors. You used lowercase letters for the names of the restaurants and at the beginning of some sentences" [this could not be noted from the transcript because it was typed as read; this dialogue between the instructor and the student is the only indicator]. "Did you notice a pause in some of what you were reading? And what about any errors other than what you said?"

Carol: "Yes, I realized I paused. I see a lot of red and green lines in my paper. But I don't really know how to correct them cause I'm not sure what they mean."

Ms. Carter: “Sometimes a natural pause will let you know that you need to use some sort of punctuation. You also have short, choppy sentences and some fragments.”

Carol: “But I don’t really know how to fix them cause I’m not sure what they mean.”

Ms. Carter: “Okay, I am going to scroll down to the last page of your essay and write down a few basic rules I want you to remember for correcting the paragraph you read and the rest of your essay. In fact, we are going to play a game.”

Carol: “We are? What game?”

Ms. Carter: “I am going to write the down the definition or provide an example and whenever I write and say blank, you must fill it with the right word or phrase. Ready?”

Carol: “I guess.”

Ms. Carter: [Annotates as she writes] “A complete sentence has a subject, a verb, and makes a complete thought. Therefore, if a group of words is missing one of these it is a blank.”

Carol: “Run-on?”

Ms. Carter: “It has something missing so that will not make it a run-on, but a blank…”

Carol: “Um…oh, a fragment.”

Ms. Carter: “A fragment can be corrected by joining it with another sentence or by adding whatever is missing. Example: Studying all night…”

Carol: “is a fragment.”

Ms. Carter: “Great, so how can you correct it?”

Carol: “made me tired at work. I get it…Studying all night made me tired at work.”

Ms. Carter: “After what we discussed about capitalization, you learned two rules to apply. One capitalization rule you learned is…”

Carol: “To use a capital letter for names of places. And the second rule I learned is to capitalize the first letter of a sentence.”

A psychological lens is one way of analyzing the excerpted transcript of the Skype interaction. From the beginning of the excerpt, Carol had little knowledge of fragments, capitalization, punctuation, and overall sentence sense. She moved from VanLehn’s first phase of skill acquisition to the second phase, intermediate (1996). In the initial phase, Carol used what she realized as inaccuracies to process new knowledge*, “*But I don’t really know how to fix them cause I’m not sure what they mean.”

After being exposed to accurate information, which in this case is the instructor’s cues and explanation of the concepts, Carol went through the intermediate phase of skill acquisition by attempting to apply the knowledge. She made some mistakes, trial and error, but Ms. Carter guided her after she failed to respond correctly to the first cue, and said, “It has something missing so that will not make it a run-on, but a blank…” Carol moved through the intermediate learning phase as she thought and attempted a second time to come up with the correct answer, “Um…oh, a fragment.”

Table 3 shows a comparison of Carol's paragraph between the rough draft and the revised draft, which resulted after the Skype interaction with Ms. Carter (Transcripts from another session revealed the corrections):

Table 3

Comparison of Carols Two Drafts

Carol's Two Drafts	
Before Skype Interaction	As a Result of Skype Interaction
mcdonald's and burger king have a lot in common but also a lot not in common. mcdonalds is all over the world. burger king is not. mcdonalds have a double lane drive thru. Burger king have a single lane. mcdonald's have healty menu. with salads and stuff, wherease burger king don't have nothing healthy. The meet is the same at both places. Not reel. They cook the food it just sits there til somebody comes to buy it. It is nasty. Which is why whenever i go past one. i don't stop i don't care how much my kids beg me. Sometimes we go hungry. Driving around looking for something to eat other than micky d's and burger king.	McDonalds and Burger King have a lot in common, but there are some differences. McDonald's is located in many countries, but Burger King is not. Both restaurants have drive-thru, but McDonald's has double lanes and Burger King has single lanes. Another difference is that McDonald's has a healthy menu, like salads and low-fat milk. I don't recall seeing anything healthy on Burger King's menu. The meat in both places is not real. The food is not cooked to order and is cold when someone orders it. It is nasty, which is why I never stop whenever I go past them, although my kids beg me to. Sometimes we get hungrier as I am driving around searching for something to eat other than Mickey D's and Burger King.

In the corrected version of the paragraph, Carol moved to another level of skill acquisition. Based on the transcript, she demonstrated an understanding of capitalization,

fragments, and punctuation and applied her newly acquired knowledge to revising the paragraph in Table 2 and the entire essay.

Siemens's (2005) connectivism theory provides a basis for analyzing the excerpt and the differences between the two paragraphs. Siemens contended that skill acquisition occurs when students see connections between ideas. Carol was not told that beginning a sentence with an –ing word can sometimes create fragments, but she made the connection during the game with the instructor, "I get it…Studying all night made me tired at work." She showed that this new information caused her to realize that "Driving around looking for something to eat other than micky d's and burger king" was incorrect and caused her to change her writing, "Sometimes we get hungrier as I am driving around searching for something to eat other than Mickey D's and Burger King."

Skill acquisition can also be derived from immediacy for knowledge (Siemens, 2005), which means immediate corrective feedback at the time a student shows a need for knowledge. This can be seen in Carol's dialogue above, "But I don't really know how to fix them cause I'm not sure what they mean." Ms. Carter acknowledged that Carol's statement and tone "seemed like a desperate cry for help to learn how to correct her sentences," which was why she engaged Carol in the guessing game. The helped Carol and Ms. Carter build knowledge from Carol's prior knowledge. Ms. Jones also helped her students acquire skills. The excerpted transcript below shows how Ms. Jones and her student, John, interacted to construct knowledge.

In a Skype session between John and Ms. Jones, John questioned Ms. Jones because she marked and commented that he had too many dangling and misplaced

modifiers. He inquired, "But how do they make my writing confusing." Ms. Jones explained, "They interfere with the meaning you are trying to convey." The lighthearted, but focused interaction between John and Ms. Jones led to his acquisition of dangling and misplaced modifiers. He laughed as he said, "Dangling, misplaced…What's the difference? Heck I don't even know what a modifier is." Ms. Jones took advantage of John's readiness for acquiring an understanding of modifiers, "If that's all I need to do [improve on using modifiers], then I got no problem with that. Show me!" Immediately, she began by using a cue to prepare him to think, "Okay, first think about what the words "dangling" and "misplaced" mean." John replied logically, "Dangling means something is hanging and misplaced…well that is easy." Ms. Jones instructed John to read one of the sentences she marked as a dangling modifier. The screen-sharing feature was on and turned to John's computer screen where his paper was already open. Ms. Jones later informed that she listened intently and watched as he moved his cursor over the words as he read, "Having rented his home for years, neighbors thought nothing of it when Sam built a fence to separate the properties." She then stimulated his mind and prompted an active response, "There is an unintended meaning caused by the dangling modifier. Can you explain what the sentence means?" John confidently explained, "It means that Sam's neighbors thought he owned the home because he had rented it so long and they didn't think it was unusual for him to put up a fence." John went through a few more trials and errors as he eventually caught on to one of examples Ms. Jones provided.

John moved through the phases of VanLehn's (1996) three levels of knowledge or skill acquisition. He started out with no knowledge of modifiers, was presented with

examples and definitions, made inaccurate responses, and with trial and error, arrived at how to fix his writing problems. John presented a challenge through the process of learning. The challenge had "less to do with his ability and more to do with his not wanting to change his thought process," Ms. Jones believed. John chuckled as he protested, "But that makes no sense" and "No one would have took it that way, only English teachers." Once he accepted the fact that the misplaced and dangling modifiers caused subtle unintentional meanings, his attitude changed and he was able to make connections (Siemens, 2005). In fact, when he realized the subtle unintended meanings behind the examples, he laughed and took it upon himself to decipher the meanings and make corrections to the four remaining examples that Ms. Jones shared with him from her computer screen.

Both Carol and John demonstrated behavior of what Siemens (2006) meant when he stated that knowledge no longer flows one way, that allowing learners opportunities to respond to knowledge enables them to recreate variations, and build momentum in "ideas that can be sharpened, enlarged, challenged, or propagated" (p. 7). Both students acquired information, but a closer analysis revealed the subtle difference between acquiring new skills and acquiring new knowledge. Carol's learning experience was more of skill acquisition because she built on the ideas and concepts discussed between her and Ms. Carter regarding specific grammar skills, such as capitalization and fragments, and applied the skills to creating a correctly revised essay. John's interaction with Ms. Jones was first seen as knowledge acquisition because he struggled and even challenged the idea of misplaced and dangling modifiers creating unintentional meaning.

When Ms. Jones tried to explain to him why there was unintentional meaning he said, “But that makes no sense,” and later “No one would have understood it that way. Only English teachers” [he laughed]. As Siemens (2006) pointed out, because skills tend to be practical and easy to apply, they are not as difficult to learn, but constructing new knowledge is more challenging because learners tend to believe that what they have regarded as logical truths cannot be changed. Siemens contended that learners go through disbelief of new information as they construct new knowledge. Although Carol was accepting of Ms. Carter’s feedback regarding grammar skills, “Okay, I will get more practice and revise my essay like you told me,” she was not a passive learner. She was in the co-creator’s phase of learning (Siemens, 2006) because she worked with her instructor and she demonstrated her understanding of the grammar concepts by revising and producing an improved paragraph.

Other than John’s accurate responses to Ms. Jones’s questions, it cannot be assumed that John acquired new knowledge; rather he was in the learning phase of reconstructing his thought process. John’s experience can be seen as acquiring a new skill of critical thinking rather than fully understanding dangling and misplaced modifiers because he would be more likely to think deeply about how his sentences sounded and to question his writing to determine if there are any unintended meanings. John appeared to be in Siemen’s (2006) complexity stage of learning because he realized he had to alter his thought process and adapt to his new realization. He told Ms. Jones later towards the end of the session, “Boy, I can’t wait to read this to my wife and brother to see if they can

catch the unintended meanings," which is an indicator that he was beginning to accept the new information and wanted to confirm it with others.

Learning by example and learning a single principle are ways that can also lead to the acquisition of knowledge, according to VanLehn (1996). VanLehn contended that students acquire knowledge faster when they are given examples rather than trying to solve problems themselves and when they are given a principle or a specific concept to apply. Ms. Jones, "There is an unintended meaning caused by the dangling modifier. Can you explain what the sentence means?" John provided a response, but missed the point. Ms. Jones made several more attempts to get him to understand. John replied, "But that makes no sense." Ms. Jones told him that is because the way it is written is awkward. John said, "No one would have understood it that way." Ms. Jones gave John two examples, but he continued to not, "see anything wrong with the sentences." Therefore, she provided John with a principle to apply for the placement of modifiers. Immediately, John was able to grasp the knowledge," which he eagerly applied to the examples and a sentence in his paper.

When students were asked how interacting with their instructor through Skype had an impact on the changes they noticed in their writing, five out of six responded positively. Carol said, "Ms. Carter used a lot of examples that helped me understand." Carla stated, "She guided me along." Carrie said, "She mostly focused on my biggest problem and wrote examples of how I could make corrections." Janice exclaimed, "Lots of illustrations!" John informed, "Ms. Jones wrote samples and we discussed them when we Skyped." Although Jenny's tone was negative, her response was insightful, "She

didn't answer my questions directly. All she did was pose questions and examples and wanted me to figure it out." Students' perception that their writing improved and their responses to how the instructor helped them improve provided merit to VanLehn's (1996) claim that learners pick up faster by examples.

Gained confidence. Overall, student participants had a change of attitude towards writing as a result of the Skype conversations. Five of the six evolved from anxiety and fear of writing assignments to an air of confidence towards writing assignments. John explained, "I used to hate writing, but now I see it ain't so bad." Janice stated, "Ms. Jones helped me realize that my writing was not so bad, so now I am not scared to write for school." Carla said, "I can get my points across without stressing." Carol exclaimed, "Oh my God! She helped me to actually like writing!" Carrie valued the changes that occurred because of the Skype interactions, "Ms. Carter broke things down and made it easy for me to understand, so now I know I'm gonna make it through the rest of my classes." Jenny had a different experience, "The interactions did not help me. I was more confused because she asked too many questions instead of showing and explaining." Based on these responses, students' tone, and comparison to the responses from the icebreaker question "share your feelings about writing," student participants went from not liking writing to having a sense of confidence.

A positive attitude leads to confidence. Confidence appeared to significantly influence the way some students approached the sessions and responded to the cues. Ms. Carter guided Carla through using the screen-sharing tool in Skype and the student replied in a positive tone, "Okay, I have never used screen sharing before. Oh, I see…got

it. Can you see my screen now?" Later in the same session, Ms. Carter explained to Carla how to use the university library databases. Ms. Carter switched the screen to her computer and demonstrated to Carla how to conduct a search.

After the demonstration, Ms. Carter instructed Carla to turn the screen sharing to her computer and do exactly as was shown. Carla's reply below showed confidence:

> I click on the tab at the top that says *Library*. I want to search for attention-deficit disorder. So I can probably click on the psychology database that would probably have what I need, but I prefer the easy way, so I'm gonna type my topic here, click peer-reviewed.

Carla's positive attitude gave her the confidence she needed to successfully search the library databases, despite her initial, yet light hearted comment, "Oh my! I never could understand how to use the library databases." Carla's confident and positive mannerism influenced how she approached the task, although it was new to her.

The gained confidence and positive attitude helped students to recall information faster. Carrie and Ms. Carter exchange dialogue: Ms. Carter asked, "Can you explain what is wrong with this sentence 'Baseball and basketball is different sports yet they have a lot in common'?" Carrie, "Oh, right, now I see two errors—it is supposed to be are and yet is a FANBOY, so I need to put a comma before it." Janice eagerly recalled, "Never mind, I remember the assigned reading said that a thesis needs to have three points," when she asked Ms. Jones why she commented that her thesis needed improvement. Students responded to cues and hints with confidence. Carol's tone was at first apprehensive when Ms. Carter told her they were going to play a game to sum up what

Carol should have gleaned from the session. In fact, Carol failed to recall the information on the first attempt, but after she gained confidence, she responded to Ms. Carter's cues and hints with confidence and momentum. This example demonstrates this: Ms. Carter, "Example: Studying all night…" "Is a fragment," replied Carol quickly. Ms. Carter, "Great, so how can you correct it?" Carol replied, "Made me tired at work. I get it…Studying all night made me tired at work."

Confidence also caused some self-regulated actions among student participants. Carla demonstrated self-regulation when her search came up with 4,000 hits. Ms. Carter asked her if she knew why she had so many, and she replied confidently, almost cheerfully, "Oh, because I forgot to set the parameters. I am putting in the dates and narrowing my search to journal articles only, no books, and I don't care about the authors...." John took the initiative to use the thesis generator to help create a thesis for his paper and realized, "I don't think you would have liked the two line thesis that came from the thesis generator. I decided not to use it and came up with my own." John displayed self-regulation and autonomy.

The examples in the above paragraphs show that student participants felt their writing improved because they were able to understand and apply information or knowledge to solve problems or complete tasks (Siemens, 2006) facilitated by their instructors. Their attitude changed from not liking writing to "appreciating and looking forward to the feedback and sessions," as explained by Janice. The positive attitudes resulted in confidence and self-regulation, which evolved into learning. It is illogical to assume that learning in any phase by any of the students was thoroughly and completely

carried out. However, the data from the interviews and transcripts indicate that some information, concepts, and writing principles were picked up by majority of the students and that students were engaged in the process of acquiring new skills and knowledge.

Reinforcement. Another theme that was implicit among the student interviews and the Skype conversations was reinforcement. Reinforcement is an effective way of motivating students, building self-efficacy, improving self-esteem, and improving learning (Tollefson, 2000). The two instructors in this study used praise and encouragement to reinforce student learning. Four of the six student interviewees expressed how their interactions with their instructor motivated them to improve their writing. Carol explained, "She was always positive and that helped me want to improve." Carla said, "She always encouraging me." John stated, "Praise along with honesty kept me thriving to reach the next level." Carrie reflected, "She boosted my confidence even when I knew my writing sucked." Janice showed more of an appreciation for the instructor rather than reinforcement, "I thank her for helping me understand how to write." Jenny's negative tone and response, "She was nice and patient, but I still don't know what she was talking about," showed two positive indicators of reinforcement: niceness and patience.

Ms. Carter had a straightforward, sprightly, and unconventional scaffolding approach towards her students' nervousness, lack of understanding, and uncertainties. The audio recording of Ms. Carter and Carol's first session together revealed their tones and attitudes. Carol's voice was a bit tight and restrained. Ms. Carter did not add to Carol's anxiety by saying the typical, "speak up" or "excuse me." She told Carol, "Carol,

sweetie, I hope you don't mind my calling you that. I am Southern. There is no need for you to be nervous. Breathe and relax so we can enjoy one another." After Carol's first restrained, "Yes ma'am," at the beginning of their first session, her voice was no longer weak and inaudible. In fact, there was a remarkable difference between the two sessions. At the beginning of the second session, Ms. Carter giggled as she told Carol, "Okay, so you know I am going to fuss a bit, right!" Carol chuckled back and in a confident voice said, "Go ahead, I need it!" In the interview, Carol explained that Ms. Carter gave her confidence and motivation because she always praised her. "She must have been a cheerleader because every time I did something right, she would say stuff like, 'I'm so proud of you!' and my favorite was when she would do her Martin impression and say, 'You go girl!'"

Ms. Carter peppered positive reinforcement in excitable tones throughout all of her interactions with students. When Carrie was hesitant to respond to one of her cues, she exclaimed, "Now, you know you can do it. Stop second-guessing yourself!" and when she finally told her the answer, she said, "Now you should pat yourself on the back!" Carrie informed in the interview later, "At first she intimidated me because I wasn't used to hearing a teacher say things like that, but her funny ways kept the Skype sessions live and entertaining."

In the interview, Carla reflected on the sessions she shared with Ms. Carter, "She had me telling myself, 'You go girl' when I knew I did something right." Carla shared that one time she expected Ms. Carter to get impatient because she had obviously not read the course reading for how to construct a thesis:

> My thesis was all jacked up. She asked if I remembered what the text said about constructing one. I told her a bogus yes and tried to revise my thesis. She said something like, 'Now young lady, you are going to have to do your readings to understand the material, okay?' After she had me read the directions on how to write a thesis from her screen, I still struggled, and so she said, 'It's okay, I like that you are trying. We all have a hard time creating these things!' She demonstrated for me and when I finally came up with a good thesis, she almost yelled, 'Yes! Now you are thinking! You go girl!' and in another session, she told me, "You see how this paragraph is written? I want to see you do more of these. You don't give yourself enough credit.

Ms. Carter's style of reinforcement was humorous and engaging. Each of her students enjoyed her and felt encouraged and motivated by her positive praise. She was understanding and sensitive to the newness that she realized her students felt from having to talk to a stranger about their writing and having to use a tool they may not have been familiar with in the context of education.

Ms. Jones was more soft-spoken, less direct, and formal in her style of praise. In one session when she was explaining to Janice that her paper was disorganized, she told her, "Wow! You have some wonderful ideas in your paper. We just need to discuss how to arrange them." In the next session, after Janice made revisions, she said, "I am amazed by the improvements you have made!" Janice stated in her interview, "Ms. Jones was so nice that sometimes it took me a minute to realize she was trying to tell me I did something wrong."

John appreciated Ms. Jones for her praise and honesty. He said, "She is careful not to make you feel stupid, but she has a way of gently chastising you." To capture the meaning of John's statement, I replayed the audio recordings of Ms. Jones's sessions and listened carefully, writing down her techniques. She appeared to verbalize the sandwich approach to feedback. When she needed to correct her students, she started off with something positive, such as "I like the way you compared your subjects using point-by-point" then she kindly questioned the students to get them thinking about their writing, "You think it is a good idea to use that word?" After she guided the students to correction, she always said enthusiastically, "That is awesome! I am so proud of you!" John said in his interview that her "I am so proud of you!" praises felt like hugs.

The examples above demonstrate that students perceived praise to be supportive as they learned new skills. The verbal praise and kind constructive tones of the two instructors reinforced, motivated, and created a positive climate, which became the culture (Bruner, 1960) to which students became accustomed. Based on the students positive comments regarding the instructors' "positive and nice" words, they may have felt similar to John as he explained the impact of the Skype interactions, "Sure hope the rest of my teachers are patient and can explain to me the way Ms. Jones did cause then I know I will pass my classes with flying colors." The instructors possessed positive interpersonal skills that may have not only shaped students' impression of their writing skills, but may have also improved students' interpersonal skills, which can carry over to their personal and professional lives (Vygotsky, 1978). This aspect of instructors'

interpersonal skills was able to help students learn during Skype interactions, something that may have been missing without them.

Research Question 2: How do instructors perceive changes in the writing of remedial students based on Skype interactions with students?

To arrive at a detailed and accurate summation for this question, three interview questions were crafted from a consensus of two research experts from my committee. Instructors were asked what kind of changes they observed, to provide examples of those changes, and to explain how their interactions effected the changes they observed. The instructors confirmed students' perception that they acquired skill and/or knowledge, and therefore, skill acquisition was a theme for this question. In addition, instructor participants continually referred to students as independent, motivated, and self-sufficient, which emerged as a theme of self-regulation. Lastly, an examination of the instructional approaches resulted in critical thinking being the third theme.

Skill acquisition. Both instructors observed growth and improvement of basic writing skills. Ms. Jones reflected on growth and application, "They applied my feedback in revisions and other writing assignments." Ms. Carter's response was of a holistic improvement, "There were remarkable differences between the first and last papers submitted." Some specific changes they both observed in their students' writing included organization, style, and mechanics. Ms. Carter noted improvements in transitions and readability, while Ms. Jones added topic sentences and thesis statements. In addition, Ms. Jones expressed her satisfaction with how well her students learned to use the writing process: "It was evident that each of the students took the time to

proofread and edit their work before they turned it in because I could read their papers without getting confused." Ms. Carter mentioned, "I noticed that, after the first Skype session, students discussed their writing using correct terminology." For clarity, I asked her to expound further, "They know the language…they know, for instance, what syntax is and would use it as they were discussing their paper." She reflected, "One student, in particular, picked up quickly. She asked some challenging questions about diction and syntax, but after I explained and demonstrated the concepts, I could imagine I was talking with another instructor." The two instructors spoke with pride as they explained the improvements they saw in their students.

Instructors used various techniques to scaffold the acquisition of knowledge and skills. Ms. Jones used refining and demonstration techniques (Bruner, 1960) to assist Janice in understanding the difference between casual and academic writing. Janice initiated the acquisition of knowledge by asking questions, which is an important part in learning new knowledge, "I am not sure what some of the comments mean about my diction and sin…syntax…is that how you say it? What they mean?" Ms. Jones directly defined the meanings, which helped to refine Janice's understanding of the concepts, "Diction means the style and choice of words, and syntax is the arrangement of words." Janice extrapolated meaning, "So you are saying that something is wrong with the type of words I used and the sentences don't make sense?" in what Vygotsky (1986) would call a verbal thinking tone. She appeared to be in the process Vygotsky's concept formation because she focused her attention on the concepts and tried to identify selective features, as she sought to redefine her own meaning of her written ideas.

In response to Janice's inquiry, Ms. Jones engaged her into negotiating meaning, "Let's just say that academic writing is a different discourse than casual writing. You must consider your audience," by providing a demonstration, "If you went on a date, and you told two different people about the same date: Your grandmother and your best friend, would you tell your grandmother about the date the exact way you would tell your friend?" The specific use of the word—audience served as a functional "tool" (Vygotsky, 1986). Janice replied with laughter, "Oh, heck no! My grandmother would skin me alive." Ms. Jones continued by using the respect that Janice had for her grandmother as an analogy for academic diction, "Now think of academic writing as being formal. You are talking to an audience that you have a formal, respectful relationship with, such as your supervisor, and therefore, certain words would not be appropriate." Janice replied, "Wow…I never thought of it that way. So my essay is okay, but it's diction and syntax is too informal for school writing." When Janice realized that all she needed to do was to reword her essay, her voice reflected a smile, which indicated that the interaction led to the removal of frustration.

In the excerpt below, Ms. Carter supported her student, Carla, in acquiring an understanding of a thesis statement:

> Ms. Carter*:* "Now let's talk about your thesis statement. You have here: 'I am going to compare and contrast why public school education is not as good as homeschool education.'"
>
> Carla: "Yes, I always have problems with thesis…"

Ms. Carter: "…a thesis here means one statement that shows what your entire paper will be about."

Carla: "Okay, that's what I did, right?"

Ms. Carter: "Yes, but it is the way you did it. In academic writing, you do not want to make announcements…Instead, you use an effective statement to communicate to your readers what your paper will contain."

Carla: "Ugh, I am still confused."

Ms. Carter: "Okay, remember the directions said you had to have three parallel points to compare/contrast your topics, correct?"

Carla: "Yes, I am using curriculum, environment, and supplies. I discussed them in the body."

Ms. Carter: "Yes, and you did a great job. You need to show this in your thesis statement. The thesis needs to include your topic, a controlling idea, and three reasons or points about the topic."

Carla: "I think I almost got it…so maybe something like 'When deciding between public schooling and homeschooling, parents ought to consider the curriculum, the environment, and supplies.' How bout that?"

After Ms. Carter interjected, "I am so proud of you!" she made sure Carla understood by having her read various thesis statements and identifying the most effective one. This exercise helped Carla to point out other important aspects of an effective thesis statement.

The interactions between Ms. Carter and Carla can be analyzed the same as that of Ms. Jones and Jenny. Both students had a gap or misunderstanding of a concept, both

were guided by refining. Unlike Ms. Jones, who illustrated and explained, Ms. Carter clearly described and explained. In Ms. Carter and Carla's interaction, the support was removed after Ms. Carter's explanation, and Carla's gap in knowledge of a thesis shifted to self-construction of a thesis. In addition, like Janice, Carla's frustration disappeared. A comparison was not made to point out which instructor was more effective because other factors may be involved, such as the difference in concepts, difference in learners, and learning styles. The point worth noting is that both interactions caused a positive change in the students' thought process and their emotion, which is least likely to occur in online low performing students (Cho & Shen, 2013) without the support and guidance of an expert (Bruner, 1960; Vygotsky, 1978).

Self-regulation. According to Cho and Chen (2013), self-regulated learners take control of their own learning, without the force of any outside help. This theme emerged from instructors' interviews and audio recordings of Skype interactions. Instructors either discussed or described variables such as confidence, autonomy, initiative, clarification, enthusiasm, and ownership. The transcribed dialogues provided additional evidence that the variables contributed to the occurrence of self-regulation.

Ms. Carter described confidence as she reflected on her interactions with Carla and Carol, "They were both great students, but they were either shy or not really comfortable talking to me at first. I had to lead the session." The transcripts from the first session involving these two students supported this contention. As discussed above, Carol's nervous tone resulted in a strained "Yes, ma'am" when Ms. Carter asked if she had questions about her feedback. Ms. Carter had to squeeze information out of her

because Carol did not explain the questions she had, “Okay, so you want to share with me your biggest concern so we can start from there?” There were 55 seconds of silent hesitation before Carol said, “Um…it don’t really matter.” At the beginning of the next session Carol was prepared and spoke assertively, “I wrote my questions down. I wanna know if I have to stick to the outline I turned in.” Carol transitioned from timidity in the first session to confidence as she initiated the session.

Ms. Carter remembered, “It didn’t take long for Carla to shed her shyness. By the end of our first session, she was comfortable.” The audio recording showed that Carla’s voice was more of the politeness that a person would have towards a stranger, “Yes, can you please explain what you meant in the first comment,” she replied to Ms. Carter’s typical question, “Is there anything you want to discuss first?” As Ms. Carter said in the interview, Carla was comfortable before the end of the session. The transcript showed that the interaction between the two changed from formal question/answer and teacher/student response to a conversation. Carla made comments such as, “Oh wow! I can’t believe I did that!” “…crazy, right!” and, “My mind must have been in space cause I know that.” When I asked about her third student, Carrie, she said, “She pretty much remained the same during our Skype sessions, but she was more confident in other ways. Carrie preferred messaging her questions and concerns between our Skype sessions” The messaging was not part of the study, but because it was one of Skype’s features, and since Ms. Carter mentioned it, I asked if messaging was commonly done.

Ms. Carter stated that she put an announcement in the main classroom forum to let students know that they could message her through Skype if they needed help while

she was online, but "Carrie was the only one who messaged me." She further explained how Carrie's confidence at messaging grew, "At first it was a simple question about the title page, and over time there were more messages, and even requests that I read a paragraph here or there before she used it." Ms. Carter explained that she did not mind responding to Carrie's messages and was happy that Carrie took control of her learning.

Ms. Jones observed two of her three students who demonstrated confidence in their ability to converse about their writing, "After the first session, they were not afraid to ask questions and talk about their paper." Audio recordings of Ms. Jones Skype sessions showed the same tones and formalities as Ms. Carter. There was the nervous uncertain, "I don't really know how to begin," of Janice. The voice of surprise, "Oh, I thought you were gonna tell me what to do first," of Jenny. Finally the I-hate-to-bother-you tone of John, "I hope you don't mind explaining…" By the second session, Ms. Jones's two students, John and Janice transitioned from formal questioning and answering to conversations that showed confident expressions: "Been a long time, but it's all coming back to me now," and, "I am ready for this session." Regarding Jenny, the third student, Ms. Jones was not sure if the student showed an improvement in confidence, "If the term was longer, I would have changed my approach to this student because it wasn't working." The interviews from both instructors and students (discussed as part of research question 1) along with the transcripts from the Skype sessions show how confidence was interpreted to be an aspect that impacted students and instructors' perceptions of changes in students' writings. Hence, the interactions, which consisted of dialogue and friendly conversations, gave students confidence, which led to self-

regulation. Both instructors perceived confidence from students, as their students initiated dialogue that was pleasant and showed connections to prior knowledge.

Ms. Jones had two students who she said, "Possessed a sense of ownership and pride in their writing." She spoke of Janice's unending effort to improve, "I know she will continue to do well because she became a little OCDish about her writing. She seemed to enjoy showing me how she improved on a prior problem we discussed." The excerpt of the transcript below showed this to be true about Janice:

> Remember I had a tough time with subject and verb agreement cause I write the way I talk? I did what you said and studied and read my paper aloud and this paper has none of those errors. I put a lot of time in it so I know it line by line.

In addition to being proud, Janice showed ownership by putting time and effort into her paper, and she had an enthusiastic tone. John showed the same qualities:

> I knew I was gonna do good on this paper because I edited and revised my paper at least three times before I turned it in to you. I made sure to check for dangling modifiers and any other grammar errors in this paper. I want to have an A average.

Possessing pride, ownership, and confidence are characteristics found in high performance students and tend to be missing in low-achieving online students compared to their face-to-face counterparts (Cho & Shen). As shown in the examples, students in this study took pride in their learning, showed ownership, and developed confidence, and therefore, it is sound to contend that the Skype interactions had a positive impact on students' perceptions of their writing.

In response to the interview question: How did the Skype interactions impact the changes you observed in your students, Ms. Carter stated, "Each of my students was thirsty for knowledge and I let them lead when they were ready." She stated that she was surprised, but proud the first time Carla initiated a session, "I need you to help me understand why the words I used are slang." She said, "Carrie was independent because she took the time to read my feedback and actually took my advice." The transcript of this revealed further that Carrie, "…got more practice with paraphrasing by doing the skill-and-drill exercises and reading the tips in the textbook." She said Carol, "Always wanted to be sure everything was clear. She often repeated things at the end of our discussions." Seeking clarification is part of the learning process and is a quality found in self-regulated students (Bruner, 1960).

Ms. Jones said, "Two of my students were independent learners." The first one shows how Janice's persistence led to understanding. John's conversations show that he validated what he learned.

Janice appeared to be in control of the session when she told Ms. Jones, "Um…well, move down to comment eight." In fact, Janice put effort into her learning by recalling previously learned information, "I know we learned last week that a sentence should have a subject, verb, and make a complete thought…." Then she appeared to challenge Ms. Jones by asking, "…so why is this right here: 'When students attend public school. They must pass state required tests' a fragment? Ms. Jones had to help Janice understand subordinate clauses and fragments because Janice insisted, "It has a subject—students, a verb—attend, and it sounds like a complete thought." Ms. Jones directed

Janice to read the clause alone and tell her if it still made sense. Janice did so, and responded, "You're right! So I just delete the period, replace it with a comma, and combine it with the sentence after it. Cool." Janice's determination led to a practical and deeper understanding of a sentence. She indicated that she understood the definition of a sentence and even how to identify the subject and verb, but had difficulty discerning a complete thought when a subordinate conjunction was added.

"John was self-sufficient and unafraid to seek clarification after we built a rapport," Ms. Jones shared in the interview. A snippet from one of her sessions with John showed how he took control of his learning and sought clarification outside of their session:

> No disrespect, but I was throwed off by what you said about dangling modifiers, so I googled them and found something by Grammar Girls Quick and Dirty Tips, Purdue Owl, and some other websites that gave me a lot of information on dangling modifiers. You were right.

An examination of the transcripts showed that Carla, Carrie, Carol, Janice, and John were all self-directed and self-responsible learners. Jennie was the only student who appeared confident, but "seemed to resist help," Ms. Jones stated in the interview.

With the exception of Jennie, the remaining five student participants illustrated what Piaget (1952) called democratic learning. John especially exemplified Piaget's concept of democratic learning because he appeared to realize that what may be factual or true at one point may not be the case at another time, so he took the initiative to confirm by looking up the information Ms. Jones presented to him. It would not be accurate to

conclude that the student/instructor interactions led to such behavior in this short time, but it shows that this type of interaction fosters the characteristics necessary for students to progress. These students may have already possessed independence and determination because of their backgrounds. John and Carrie retired from the military and Janice had her own business, while Carol managed a department store for 12 years. Another fact in considering their self-regulation is that they were among the first, if not the only, volunteers for the study, which indicated their openness to opportunities for improvement in their learning, even after realizing that they would get the same Skype tutoring without the study. Perhaps John spoke for all participants when he shared at the end of his interview, "I know this was voluntary, but I think this [study] validated what was going on because of the audio recording. It's like…you know when someone is watching, you gone do right." John may have been speaking from his experience with another online instructor or online course because he enrolled in an online program two years prior, but said it did not work out because when he had questions, the instructor took too long to respond.

Critical thinking. Critical thinking was another prevalent theme throughout the Skype conversations, which helped to inform Research Question 2. Andragogy is the preferred method for teaching adult students and it emphasizes Socratic questioning as one of its strategies to stimulate critical thinking because it calls upon students to develop their thinking more deeply and to pursue connections between their current knowledge and new knowledge (Paul & Elder, 2007). Ms. Carter replied, "My students became critical thinkers," and light heartedly added, "They seemed to question me at times."

In the excerpt below, Ms. Carter cultivated critical thinking by helping Carla move from a general thesis sentence to arriving at a logical, more rational sentence. Carla initiated the question, which is a sign of reasoning: "Why do you say my opening sentence in my introductory paragraph sounds uninteresting?" Ms. Carter required that Carla be intellectually responsible by directing her to, "Read it aloud and you tell me if it were a headline that you would be interested." Carla read as instructed, "An education is needed to get a decent job nowadays," and added, "Sounds good to me." Ms. Carter probed to get Carla to see the lack of information can be misleading: "A high school diploma is an education, so that means anyone who has a high school degree can get a job working for Walmart?" Carla evaluated the logic, "Well…yes, but I didn't mean a high school degree and I was talking about a decent job." Ms. Carter facilitated Carla's thinking: "What do you mean by decent?" Ms. Carter continued to probe until Carla understood that her statement lacked interest because it was too general. Carla created an improved thesis sentence, "A college degree is often needed to work in most high paying jobs." Ms. Carter wanted Carla to apply critical reading and writing to have enough material to write about: "How do you know this? How can you prove it? What evidence do you have?" Carla excitedly concluded, "I can find and cite data on the top paying jobs and use that information in my paragraph!" Ms. Carter applied Socratic questioning effectively to help Carla critically think about the content of her essay.

Ms. Jones used Socratic dialogue to encourage Janice to critically examine sources for her paper. She shared her screen with Janice to demonstrate two passages. "Janice, please read over the first passage and tell me what the purpose is." Janice read

the passage and said, “I don’t know. Those words are too big for me to understand.” Ms. Jones responded, “It’s okay. Can you tell by the title and heading above the paragraph what the passage may be about?” Janice waited a second, and replied, “Um…it is something bad because I see the words worst, crisis, and conflict, but I can’t figure out what Darfur and caricature mean.” Ms. Jones exclaimed, “Great! You are getting the idea because you looked for words you are familiar with. Now, you can look words up using the dictionary feature in your tool bar.” Ms. Jones showed Janice how to access and use the dictionary feature in the toolbar of Janice’s Microsoft Word document. That experience helped Janice to develop the skill of using resources. Janice stated later in the interview:

> I didn’t know I could look words up on my computer. That made me play around with my iPad because it don’t have the same toolbar as my computer and I found that I can just touch a word on my iPad and get the definition. So cool!

Conclusively, Janice learned a new skill that she explored further by applying the idea to a different device and yielding the same result. This showed that Janice became independent and applied critical thinking to help with other tasks.

Both instructors employed the art of Socratic questioning to foster critical thinking. They probed and guided students into adding depth and connecting prior knowledge to new material to construct new understanding. The Skype interaction enhanced Carla’s thought process as it allowed Ms. Carter to coach and guide her. The Skype session Janice had with Ms. Jones enlightened her knowledge of accessing resources for help. Although the questions were in conversational tones, they were

systematically used to help students focus, analyze, and to reason their way through an undeveloped idea or skill. Without these Skype interactions, the students may not have been able to arrive at advanced thinking about their writing. Ms. Jones admitted, "Two of my students made remarkable improvements. I can tell they thought deeply about the things we discussed because they did not repeat the errors." Ms. Carter shared, "I could tell they put a lot of effort and energy into writing their last paper because it was much better than the first two papers they turned in." Although I did not examine any before and after student writings, the instructors confirmed that the Skype Socratic dialogue replaced the surface, inadequate, unfocused, and unstructured writing with rich, focused, content that centered on ideas that were well supported and logical. The activities that the student participants were engaged in while interacting with their instructor or as a result of their instructor's interaction, such as revising, looking for further examples, searching library databases, and extending concepts to similar writing situations suggested that the Skype interactions enabled students to apply critical thinking to their writing. Students were first guided by their instructor who centered their instructional approach on questioning and demonstration. This resulted in students being able to think critically and independently, within the interactions and outside.

Research Question 3: What are the perceptions of the instructors about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom*?*

Instructor participants were asked about Skype's effectiveness to scaffold, if students felt comfortable using Skype with them, about students' level of use, and if they

would recommend using Skype. The themes that emerged were ease of use, rapport, and indispensable.

Ease of use. Ease of use was a theme because Ms. Carter and Ms. Jones made frequent references to Skype's tools throughout the interviews. Both agreed that Skype was effective in helping scaffold learning. Ms. Carter stated, "The tools made it easy to demonstrate, share, and explain." Ms. Jones explained, "The tools were…seamless, I'd say because I forgot I was even using them when I did such things as share screen, surf the library database with students, and just listen as they talked." The instructors shared that students were nervous and unsure about using Skype to discuss their writing at first, but picked up very quickly. Ms. Carter did not have to switch to phone conversations with any of these students as she had done in the past.

> This was the first full term that I did not have to switch to phone conversations. Many times, I have had to switch to [phones] in the middle of the session because students complained that they did not know how to turn on the video tool or adjust the volume…you know…simple tasks, but I guess because computers have better built in cameras and microphones those issues have been resolved. Plus Skype does a lot of upgrades.

The instructors agreed that Skype tools made it easier for them and their students. They used Skype's screen share feature to demonstrate to students and to have students show a skill they had previously acquired. In fact, Ms. Jones commented, "All of my students shared their screens with me and they did it with little to no direction on my part." As a result of the last comment, I asked Ms. Jones if students were provided any training on

Skype by the university, and she answered, "Not to my knowledge. I believe the student platform includes prompts for all of the 21st Century Tools available in the LMS." Ms. Carter stated that she remembered seeing tutorials on the university's home page for Skype, but was not sure if students were aware of them.

This discussion led to the next interview question that asked instructors to rate their students' ability to use Skype. Both instructors noted that their students used Skype without much effort. Ms. Carter stated the following about her three students, "They went from a two to a three because, after we went through the features together, they seemed to have no problems uploading, downloading, sharing their screen, or anything." Ms. Jones rated her students the same and replied, "They were a little hesitant at first, but I believe they used Skype's basic features easily, which may have been because of the prompts I mentioned earlier." The instructors' comments and previous examples provide confirmation to other instructors that Skype is an easy to use tool for engaging students in meaningful interactions.

Skype was perceived by both instructors to be an easy tool for them to help students acquire knowledge because it enabled them to provide examples of concepts and skills, assess immediate understanding, and engage in constructive dialogue. They also perceived students' use of Skype to be easy. Students were shown a concept or skill and the share screen feature allowed them to immediately reciprocate what they had just learned. Ms. Carter reflected, "I screen-shared with one of my students to show her how to search the library database and had her to turn the screen to her computer screen so I could see if she could do as I showed her." Skype's easy to use tools were appropriate for

the one-on-one Skype interactions as no one complained of its difficulty or of any technical issues.

Rapport. Rapport was a theme that emerged from the instructors' interviews in response to the interview questions regarding their perceptions about students' comfortableness and Skype's helpfulness or lack of helpfulness in other ways. Ms. Carter said, "Using Skype made students comfortable enough to trust me. And because they trusted me, they were not offended by my constructive criticism." Ms. Jones explained, "They were skeptical at first, but they began to rely on me and Skype to help them." Their mentioning of the words "trust" and "rely" was indicative of relationship building.

Their explanations of how Skype helped in other ways signified rapport. They both discussed informal dialogue. Ms. Carter was a bit emotional when she stated, "Sometimes, we veered off topic as they shared their personal lives with me…and I let them a little because I could tell they needed it…that couldn't have been done in an email." Ms. Jones was also sentimental, "My students were focused, but towards the end, they always talked about themselves or their children and pets. One student wanted her daughter to tell me goodbye at the end of our session." Ms. Carter also mentioned a sense of closeness she felt with the students, "The other thing Skype helped with…was a connection. I felt a connection with two of my students." Ms. Jones reported compassion and understanding as two other ways Skype helped, "I always feel a sense of empathy and concern for students I Skype with compared to those I don't." I followed up asking why and she replied, "Because Skype allows us to be one-on-one, up close and personal.

My students felt the same way…I could tell. One even told me not to work too much over the weekend." Ms. Carter stated, "The Skype sessions also fostered a supportive and familiar learning environment." Responses from both instructors showed that Skype created a nurturing environment for their online students.

Dialogue helps to build rapport and is an important interpersonal process that leads to higher mental processing (Vygotsky, 1978) and connections (Siemens, 2010). The instructor participants felt that Skype was an effective tool because it allowed them to build a rapport with their students. They perceived the rapport to be the result of having informal dialogue or conversations that ultimately led to their feelings of connection and compassion, which were necessary to provide the support necessary for students to grow. Although instructors and students demonstrated respect for one another, informal, yet appropriate relationships seem to have been established through the Skype interactions, which usually do not occur in online learning environments.

Indispensableness. Instructors were asked if they would recommend Skype as a tool to help students improve learning, and both replied yes. Their elaborations implied how indispensable they perceived these interactions to be with students. The instructor participants perceived Skype to be a necessary tool that excluded the need of any other tool because of its features and ease of use. Ms. Carter commented on its effectiveness at delivering instruction to students who she believed, "really need one-on-one help with their writing." In her four years of experience teaching online, Ms. Carter did not find the tools in the university's old learning management system (LMS) to be helpful. Her experience as a media specialist gave her the idea to use Skype with her online students

before Skype became available in the university's new LMS. She confessed, "Skype is the only solution to helping students like these [remedial] improve their writing. Believe me I tried everything I could think of." To indicate no bias, I asked if she tried other tools such as blogging, wiki, or twitter, and she adamantly stated, "Those may be wonderful tools for more advanced writers, but they don't provide the immediate support and attention they [remedial students] need to help them grow." The transcripts provided supporting evidence that the instructors kept their students engaged and focused on what was relevant and necessary to their students. They responded immediately to students' questions and concerns, which were opportunities for growth by demonstrating on their screens, explaining and showing simultaneously, and making them resourceful learners by using Skype to show students how to access relevant learning resources.

Ms. Jones explained her opinion of Skype's effectiveness to help improve the writing of students enrolled in an online remedial course. She believed Skype to be a "must-have" in which the university "would realize its value and find a way to tighten the requirement so that all of its online instructors would use Skype." Ms. Jones's experience as an online ESOL tutor inspired her to use Skype before it was offered as an option for instructors to make required synchronous contact with their online students. Ms. Jones shared that Skype was better than classroom face-to-face interactions:

> When you work with students one-on-one, you don't have their undivided attention and everything is not right there at your fingertips. Well…you know…it's there, but not really. When I have one-on-one conferences with my ground students, the flow is interrupted because I can't quickly access what they

> need unless I anticipate it. With Skype we are already online and it is right there in their face.

Ms. Jones had an interesting perspective because she perceived Skype to be a replacement for face-to-face instruction. Skype was viewed as a tool to help fill the void of what an online classroom lacked. Ms. Jones perceived Skype to be better and much more effective because, unlike a traditional setting, both the pupil and instructor are already online, and therefore have ready access to unlimited resources. As Ms. Jones said, "I can access information to help guide a student quicker than a flash of lightening." When asked why this could not be done in a traditional one-on-one setting, she explained,

> Because I may have to turn on the computer, put in credentials to access the Internet, wait for this, wait for that…there are so many nuances to traditional one-on-one that it is uncomfortable to the student and me.

Ms. Jones believed Skype was an indispensable tool for online teaching because it prevented the nuisances that occurred in a traditional classroom setting.

Both instructor participants agreed that using Skype as a tool to improve writing was necessary. They saw Skype as indispensable because it allowed for immediate response, immediate assessment of student learning, constructive dialogue, and especially efficient for one-on-one teaching. When instructors were asked if they would recommend using Skype to help improve student learning, Ms. Jones stated, "I think if instructors used Skype with their online students, then they wouldn't have so many drops." Ms. Carter discussed it in terms of time and policy change, "I get that it may be time consuming, but if enough instructors actually used it as the university recommends,

then we could convince the powers-to-be to give us fewer students to focus our energies on." This response prompted an impromptu question, "How do you manage your time to Skype along with your other teaching responsibilities?" Ms. Carter explained that she uses Skype to teach and to grade. Transcripts of her teaching strategies are provided throughout, but not of what she considered an "assessment session of their final draft." Ms. Carter's voluntarily shared how she used Skype to assess students' final draft:

> I plan well and I average about 20 minutes grading essays. I figure 10 more minutes is worth adding to this time to discuss their papers with them. I grade their papers as we Skype. In fact, here is what I do. I pull up the rubric and have them skim it and I open up their paper, and position them side-by-side. We go over each paragraph, noting mistakes, and I insert comments to remind them. After we are done, we turn to the rubric and ask students what they think they should get in each category. If they can't remember, I focus their attention on their paper, and often times, they give themselves lower marks than I would. This way they have no question as to why they made what they did. It gives them a chance to reflect on their errors and saves me time grading because I don't have to try and make sense of what they are trying to say.

Ms. Carter explained that she did not use this type of Skype interaction with the students in this study because of the short six-week term, which meant fewer Skype sessions. However, she wanted to share it because she found it relevant to mention this because she recommended it to her colleagues and believed if other instructors saw how using Skype benefited them, then they would be more likely to implement it into their online classes.

Research Question 4: What are the perceptions of students about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?

To obtain an accurate depiction of students' perceptions, they were asked to answer the following questions: Do you think Skype was an effective tool to interact with your instructor to help improve their writing? Explain why you did or did not find Skype to be an effective tool to help you learn skills presented by the instructor. What is your overall ability to use Skype after the Skype interactions on a scale from one to three, with three being the highest? Explain why you do or do not feel comfortable using Skype for learning new knowledge and skills, and would you use Skype again as a means to improve your learning? The themes that emerged from the interviews were ease of use, value, real-time learning, and rapport.

Ease of use. Ease of use occurred as a theme from students' interview transcriptions and Skype conversations. Their questions were similar to the instructors. The interview questions that produced this theme were: Rate your overall ability to use Skype after the Skype conversations on a scale of one through three. Do you feel comfortable using Skype for learning new knowledge or skills? Would you use Skype again as a means to improve your learning? Overall, students rated their ability to use Skype the same as the instructors rated them. John replied, "I give myself a three because I ain't never used Skype before. I read the directions in the class portal one time and I been using it since." Carrie answered modestly, "I think I am a two. I used a few tools, but didn't know you could do all that Ms. Carter did." Carla stated excitedly, "I am

definitely a three because I use it all the time now. And I never used Skype before." Janice said casually, "I am a three…it's simple to use." Carol was also excited as she explained, "I went from a zero to a three after our first session." Jenny replied, "I give myself a 3, but I already knew how to use Skype from when I took this class before" The students' responses confirmed that Skype was easy to learn and they experienced no technical issues.

Ease of use was also strongly suggested by the student participants' responses to the interview question regarding their comfort level. Carrie stated that she was apprehensive because she was just learning to type and did not have much experience with technology due to her age, but she, "picked up on it pretty fast!" Carla shared that she had never heard of Skype and felt misled by the enrollment counselor because she was not told it was a requirement. However, after she watched the short tutorial, Carla relaxed when she realized, "it was just like Oovoo, the thing my little sister uses to talk to her friends, but I didn't think it could be used for school." Carol was honest about how she felt having to screen-share and use other tools, "I really wasn't comfortable and when she [Ms. Carter] told me to share my screen with her, I thought I wouldn't be able to because I didn't have time to read the directions and watch the demonstration videos." Carol's reply was a strong indicator of Skype's ease of use.

John explained that he felt learning how to use a new tool while simultaneously learning to write was, "going to be annoying, but I am glad we used it because it was so easy to learn and a creative way to get help from my instructor." Janice found Skype to be so easy that she used it in her personal life:

> After the first session, I Skyped my son because he needed help with his math homework, and he lives with his father, so I practiced on him. It was easy and I followed a lot of the ways Ms. Jones used it with me.

Jenny shared that she was familiar with the video-chat tool, but had not used any of Skype's other features, she stated, "I already knew how to use Skype from when I took this class before, so I been using it all the time to vidchat. It was no problem using Skype. She still didn't help me understand nothing." Though Janice's response was different, it was consistent with the rest because she never indicated an issue with using Skype.

All six students indicated that they would use Skype again as a means to improve their learning, which indicated that Skype's ease of use could be carried over to other learning situations. John explained, "After my first Skype session with Ms. Jones, I told my son about how she used it…and you know he is in college. So I got him to set up a Skype account to tutor me in math." Janice exclaimed, "I most definitely intend to use it again to help with my school work." Jenny said, "I hope to have the chance to use it again." Carla responded, "I can't see using it any other way, but I know people who do." Carrie was positive, "Yes, I am gonna use it again with my teachers next term and I am glad I already know how to use it." Carol explained, "Using Skype to learn how to improve my writing gave me ideas to use it to help my daughter with her homework when she is with her daddy." The Skype interactions resulted in more than academic acquisition. More than likely, the Skype interactions will increase the chance of these students readily accepting tools to improve their learning and will use this type of

interaction for personal, social, and academic growth. Their acceptance and positive outlook about Skype meant they found it to be valuable.

Value. The interview question mostly associated with this emergent theme was: Do you think Skype was effective in helping you interact with your instructor? Five of the six students indicated value when asked to explain their opinion of Skype's effectiveness and one student indicated there was a possibility of value. Three students found Skype to be appealing. Janice stated, "It was a great tool because it allowed me to be right there with my instructor." Carla reported, "I was amazed by it at first, specially when I could see her screen and she could see mine…I like it." Carol answered, "I like how we used it." Two students saw Skype as meaningful and expressed an appreciation: Carrie explained, "I don't think I would have done well if I didn't Skype and message with Ms. Carter." John stated, "I am glad I was able to Skype with my instructor. I hope to do this in my other classes." Jenny's reply was neutral, "I didn't see a problem with using Skype or the way we Skyped…it was just how…um…I guess her teaching. As shown above, students agreed that Skype was a valuable tool to help them interact with their instructor.

Again, students implied value when they were asked to explain other ways Skype was most or least helpful. They expressed the importance of using Skype and explained how it was meaningful to them. To John, seeing and hearing "her demonstrations directly in front of me" was important. Janice also found value as Ms. Jones, "Pointed to…and explained" her feedback. Carrie explained how, "seeing her face and hearing her voice" was meaningful because it was important that she "could hear the niceness,"

which made her comfortable enough to "ask questions." Carol appreciated learning how to "search the databases because I watched Ms. Carter" and therefore found Skype to be valuable because it allowed her to "understand right away." Carla saw value in using Skype because "It was helpful in many ways because it was like having a tutor…a live person," and expressed appreciation that Skype was not like, "one of them automated computerized-voiced ones." The students found Skype to be valuable because beyond the traditional classroom setting because they were able to see and hear their instructor and felt that Skype enabled them to get special attention.

Overall, students were satisfied with using Skype to improve their learning. They valued the Skype sessions because they were able to communicate directly with their instructors and receive audio and visual feedback. They showed an appreciation for the way Skype was used to help them learn. Students also enjoyed the interpersonal connections that Skype enabled them to have. When students perceive value in something, they are more likely to use it again and to grow from it (Siemens, 2010).

Real-time learning. One student's specific reference to this concept during an interview made this theme recognizable. When asked about other ways Skype was helpful or not, John's first response was: "Real-time learning cause I learned about simple things I needed to know, not just for this class." After replaying the audio files and rereading the transcripts, it was realized that this is what students meant when they used such terms as "real learning," "practical stuff," "actual learning," and "real useful" to describe how the Skype environment impacted them. The similar reoccurring words and the Skype environment that enabled learning occurrences to take place in real-time,

without physically being present (Stewart, Harlow, & Debacco, 2011) created real-time learning as a theme. Therefore, the theme real-time learning referred to the virtual environment and the practical or "real" learning that students perceived. This theme resonated in five of six student comments that were gathered from the interviews.

Carol gained an understanding of the importance of using Standard Written English (SWE). She reflected on her session when she was slightly upset that Ms. Carter called some of her words slang and inappropriate for academic writing:

> I would not have understood why certain words were inappropriate for professional and school writing, but after Ms. Carter showed me a video of two human resource people making fun and laughing at some of the writing samples from some applicants, I was shocked, but understood. That made me take pride in my writing because the application process might be my only hope at working in the business field after I graduate.

Carol expressed an interest to grow later in the Skype session because she asked Ms. Carter how what she could do to avoid using slang, idioms, and jargon in her academic papers. Ms. Carter helped her locate a website with examples of each and suggested Carol start there.

Carrie realized that she could use YouTube to help gain insight about new material and information. She exclaimed, "When I didn't understand subordinating conjunctions, she pulled up School House Rock YouTube videos right there while we were Skyping. I sing the catchy ditty often and downloaded the YouTube App to my phone to use for other stuff." John explained that he learned "practical stuff" when Ms.

Jones showed him how to use basic tools in *Microsoft Word*, such as setting up margins, indenting, double-spacing, and creating a table were "real useful because I had no computer skills." Carla's explanation was centered on how she was impacted by the virtual, synchronous, real-time learning:

> I didn't think I would ever understand how to write a thesis statement. Had it not been for Ms. Carter showing me through Skype… I could see and hear her so clear while she explained and typed on her screen, and so I was finally able to understand how to write and support a thesis statement.

Janice shared about a practical skill that she picked up vicariously, "I learned how to save files and organize them in folders because I watched Ms. Jones do it on her computer." She also reminisced how she learned about diction and syntax that she would most likely not forget because: "Ms. Jones showed me a short YouTube video on Mountain Dialect when I had a hard time understanding sentence structure. It was amusing, but I got the point." Nothing was gathered from Jenny.

Overall, student participants stated that the Skype environment enabled them to learn other information or skills that were not directly related to the course. Because they could use the information and apply it to other settings outside the course, they considered this environment of learning to be real-time. Their definition of real-time differed from the technical meaning of an occurrence happening at the actual point and time of the said action. The Skype environment along with the skillful instructors introduced material, other than writing, that students found relevant to them. The

relevance perceived by the students equated to authentic learning that occurred in Skype's real-time setting.

Rapport. When students were asked if they felt Skype was effective at helping them interact with their instructor to improve learning, rapport emerged as a theme. Their memories encapsulated the characteristics of rapport. Carrie's tone was emotional as she reminisced:

> It was helpful to see and hear a human. That made learning a lot better. Sometimes we talked and ran out of time, but now I don't mind Skyping her or sending her an instant message if I have a question.

Carla exclaimed, "It was awesome to watch her demonstrate knowing we were miles apart, and I looked forward to her warm sense of humor." Janice explained, "I never had a nicer teacher, and she was so patient." Carol responded candidly, "I will miss Ms. Carter. If we have to Skype in my next class, I hope my professor is friendly like her because that will make it easier to learn!" John was more verbose in his response:

> The feedback made a lot more sense because I could hear and see Ms. Jones explain it, and she was good at it. I think if we didn't have that connection, I wouldn't have done so well. I intend to take her up on the offer to Skype her for help when I have a question about my writing in my next class.

Janice was the only one who had more to say when the interview was concluding, "I went to one local tutor session, and I tell you, I didn't learn nothing because that lady didn't know me." Jennie said nothing regarding rapport.

The fact that student and instructor participants' responses centered on connections, bonds, and continual communication was an indicator that their perceptions of learning hinged on rapport. The instructors saw connections and relationships being established through the Skype interactions, and students confirmed it. Students expressed that their pleasant interactions with their instructors resulted in their ability to learn new ideas and material. Both instructors agreed that the ability to converse with students helped, but that conversations were crucial for creating the pleasant Skype interactions with their students. As indicated from the conversations, Skype was an effective way to help students and instructors build long-lasting relationships and helped students change how they perceived their instructors.

Discrepant Case

Among the six student participants, Jenny was an outlier. Omitting data that are not fitting with the rest makes the study biased and unreliable. Jenny's responses were factored into the analysis because researchers have the responsibility of demonstrating truthfulness and to present the voice of all participants fairly. Therefore, Jenny's responses were equally valuable. Some of her replies, though presented negatively, were positive indicators of the themes and provided a depth of understanding of other participants' responses. Jenny's opposing views pose challenges that future researchers can use to expand this study further.

Jenny was a discrepant case because her experience was dissimilar to other student participants. In the Skype sessions, she made points of contention to most of her instructor's comments. The audio recordings from her sessions captured Jenny's

dissention. Ms. Jones said politely, "You made some interesting points. Your essay has definitely enlightened me." Jenny made no reply, so Ms. Jones continued, "Right here you said that renting is the best way to go because of the economy. Do you think you can explain what you meant by that?" Jenny pushed out air and said in an insolent tone, "I did so, you didn't read the whole thing. I explained that people need jobs and a good credit score to buy a house so they need to rent because the economy won't let them buy." Ms. Jones assured Jenny that she read her essay but needed her to show a logical connection between her claims and supporting detail so her readers would be able to understand her ideas. Jenny raised her voice, "What readers! You are the only reader and I am telling you!" Ms. Jones let out a short gasp and politely managed to get through the remaining session.

In the interview, Jenny's responses to some questions were not in accord with the other five participants, which made the study representative of reality and logic; more participants may lead to larger gaps in viewpoints. When asked if there were any changes in her writing, Jenny had a different opinion than the rest: "I didn't notice no changes." She did not agree that the Skype interactions helped build a relationship with her instructor, but spoke of her instructor's ability to teach, "It was how…um…I guess her teaching." Though Jenny's tone and attitude did not add to the themes of critical thinking and reinforcement, her responses supported the themes. While the other five participants agreed that they were required to think and engage in meaningful activities, Jenny stated, "She asked too many questions, and I think she should have been the one answering my questions." Lastly, Jenny's response to other ways the Skype interactions

helped to improve learning was different. Unlike other participants who helped create the theme of reinforcement and praise, Jenny's response "She was nice and patient, but I still don't know what she was talking about" —indicated two behaviors that could be used to motivate: niceness and patience. The discrepant case was not viewed negatively, but as positive indicators of representing a realistic environment. This case study, including the one discrepant student, demonstrated the harsh realities that may be associated with teaching. A teacher's growth in the art of teaching does not come without challenges, and a teacher who is open to growth takes on the challenges as positive opportunities for growth because she is still a learner.

Summary

The Skype sessions improved student learning by allowing them to interact one-on-one with their instructor. Instructors used scaffolding techniques such as demonstrating, explaining, motivating, and Socratic questioning to help students construct knowledge. Students demonstrated learning by gaining confidence, applying skills taught during sessions, and by being self-regulated. Instructors and students agreed that Skype was easy to use. Instructors believed it to be mandatory for improving the learning of remedial students. They also found it necessary to earn student's trust. Students appreciated Skype because it allowed them to feel as though they were in an actual classroom, rather than a remote setting. They also believed Skype helped them to like and trust their instructor's constructive criticism. Skype was the gateway to students using other 21st century tools, such as video, messaging, and chat to acquire knowledge.

Chapter 5 includes the purpose of this study and implications of its findings. Recommendations for further research are discussed based on the results of this study. A review of current literature is discussed to introduce the implications for social change in asynchronous environments of online higher institutions for remedial English composition students.

Chapter 5: Discussion, Conclusions, and Recommendation

The purpose of this qualitative case study was to explore the perceptions of instructors and students about the effectiveness of Skype as a scaffolding tool for increasing academic achievement for underprepared students in an online remedial English composition course through their interactions with the instructor. This study was conducted to add to the limited body of knowledge available on the use of Skype as a tool to provide scaffolding to underprepared adult learners of online English composition courses. The nature of this study was a qualitative case study of an online institution of higher education's use of Skype to increase students' acquisition of English composition skills through one-on-one student-teacher interactions.

Many studies have examined and investigated the impact of Skype in the fields of medicine, technology, and in education. Educational researchers investigated the impact of Skype in library science, schools of education, schools of business, and some graduate level programs. The majority research was found on Skype as a tool to teach a second language. At the time of the literature review, no research had been conducted on Skype being used for undergraduate remedial online students. The results could be used to provoke social change for online universities as they seek to find ways to improve the learning environment and to mitigate the academic and personal challenges that underprepared students may face.

The findings of this study were that students and instructors had a positive experience interacting through Skype. Instructors and students perceived the Skype interactions to be helpful at improving students' writing skills and building rapport.

Overall, participants perceived Skype to be instrumental in creating an academic culture of scaffolding for learning and teaching, as well as a continued community of social connections to extend outside the classroom.

Interpretations of the Findings

Results of the Skype sessions, student-interviews, and instructor interviews were analyzed and interpreted using the conceptual frameworks of Bruner's (1960) cultural-psychological framework, Vygotsky's (1978) social constructivist theory, and Siemens's (2006) connectivism theory. The conceptual knowledge from the frameworks guided interpretations of student and instructor's perception of student learning. Current research from peer-reviewed sources regarding Skype as a learning tool helped interpret Skype's impact on students and instructor's perceptions. The conceptual frameworks and the current research studies on Skype were used to confirm, disconfirm, or extend what is already known about Skype's use in an academic setting.

Bruner's (1960) cultural-psychological theory was used to understand scaffolding. According to Bruner, a cultural environment scaffolds novices, provides a context for deliberate teaching, and involves interactive processes. Such environment is not seen as student-centered, but as an exchange of understanding between the teacher and the learner in which the goal is to build from the knowledge that a learner already has. A culture of learning creates a reliable organized structure of collaboration and enables learners to become self-reliant and to make better judgments. Participants in this study were part of a culturally based environment that espoused interactive activities that they believed helped them to construct knowledge. Skype enabled instructors to use

instructional scaffolding strategies, such as guidance, modeling, and demonstration to create immediate opportunities in which students were able to apply, which fostered critical thinking.

This study corroborates a study by Casal (2012), who found that effective pedagogical strategies for synchronous learning tools strengthened teacher-student contact, promoted active learning, and provided reinforcement. This study found that students perceived the Skype sessions helped them to acquire new skills and gain confidence through positive interactive dialogue with their instructors. The learning environment enabled students to acquire knowledge by dialoguing with their instructor, which confirms Murphy's (2010) study that students negotiate meaning by engaging in exploratory talk with their instructor.

Vygotsky's (1978) social constructivist framework helped me to interpret the results also. It provided an understanding of how interpersonal processes shaped the perceived learning improvements. Students and instructors used interpersonal skills to interact with each other to affect teaching and learning outcomes. Students were able to reach their zone of proximal development while being guided and facilitated by their instructors. Students in this study listened, discussed, and asked questions while being guided by their instructor to improve their learning. The Skype sessions enabled students to obtain verbal support from their instructors in the form of praise, which was seen as reinforcements because students perceived it as motivating and rewarding.

This study supported research conducted by Devers (2011) that found when professors provided supportive dialogue, students tended to be receptive and more likely

to increase their performance. The findings of Lillie and Wygal (2011) regarding the effectiveness of Skype being used for virtual office hours were supported by this study because I found that students felt a connection and a sense of caring from their instructor.

Siemens (2006) connectivism theory was used to interpret the results for how students and instructors perceived the use of Skype to enhance learning. The framework provided insight on how digital networks support new ways that learners connect and socialize. Participants in this study connected through Skype, which is a social tool. The Skype interface enabled the flow of information from the instructor, who was the expert, to the student, considered the end-user. This two-way flow allowed students to construct knowledge and to take control of their own learning. Student participants found Skype to be a valuable tool for learning and building rapport with their instructor.

This study confirms a study conducted by Tuncay, Stanescu, and Keser (2010) who found that online students associated quality education with feedback and clear content. The results also confirm the study of Murphy and Rodriquez-Manzanares (2012) who found that students were satisfied and showed improvement when their instructors interacted with them in real-time. Huang and Hsiao (2012) and Kno and Boswell (2010) found that students find value and importance in learning when synchronous tools are used, something that was also found in this study.

Contrary to the findings of this study and others mentioned, Cheng (2010) found that synchronous online forums, such as Skype, had a negative impact on student learning because students felt pressured to speak when they were not ready and had a shorter response time. The results of my study challenged the findings of Cheng because it

showed that Skype interactions between students and their instructor was used to get students to open up and talk about their writing; instructors believed critical thinking improved as a result of Skype interactions. My research findings were consistent with the results of Dunaway (2011) because he found that learning was improved when multiple resources were used to create knowledge. The instructors in my study used the multiple features in Skype, such as screen sharing, file-upload, messaging, audio, and video to help students construct knowledge.

My study contradicted the results of Morrison (2011) who found that using technology tools in education and businesses posed a risk of dehumanization compared to face-to-face environments, and therefore, suggested that more research be conducted to explore ways that technological tools could be used to do the opposite. Therefore, my study added insight into Morrison's findings because it showed that Skype interactions between students and instructors had a positive impact on student's perception of the power of Skype for learning, and that both instructors and students found the technology helpful at creating rapport.

Overall, the results of my study showed that Skype interactions between students and their instructors produced positive outcomes. Students perceived they learned new skills that helped them improve their writing because of the Skype interactions. Instructors believed the Skype interactions helped improve student learning because students became confident and independent learners. Students believed that using Skype interface as a tool was effective at helping them improve their writing, and instructors

perceived Skype as an "indispensable" tool for enhancing the learning of remedial writing students.

Limitations of the Study

The primary limitation of this study is that it was a case study, and case studies are not generalizable. Yin warned against generalizing from a case study (2014). The results of this study are useful to those working in online institutions of higher education, particularly for curriculum or instructional designers and instructors who may want to transfer the findings to their particular environment. The information gleaned from this study is based on interpretations of the researcher and the perceptions of online first-year remedial writing students and experienced online English composition instructors.

A limitation existed regarding the small group size. Only six students and two instructors participated in this study. Each instructor's online class consisted of 19 to 22 students, but only three students per instructor chose to participate. Better insights may have been received from a larger group of participants.

Another limitation is that this study did not examine documents or employ archival records of its participants, such as test scores and writing samples to determine the need for a remedial writing course. The online institution administered a college entrance exam to determine students' college readiness. Therefore, viewing the scores was not necessary to confirm the participants' skill level in each course.

A final limitation was the length of the course term, which impacted the frequency of the Skype sessions. The institution defined the short term as a "mini-session" because it was 6-weeks, as opposed to its normal 12-week length. Instructors

were required to have only two Skype sessions with students rather than four for 12-week courses. This created a limitation on data collection. Only two Skype sessions per student were used to help build themes. The many limitations of this study were inherently part of a qualitative case study.

Recommendations for Further Studies

This study adds to the paucity of studies conducted on Skype being used as tool to enhance the learning of undergraduate, nontraditional, underprepared writing students. The data revealed that underprepared students and their instructors perceived the Skype sessions to facilitate improvement in students' writing. Skype enabled instructors to use various features to help learners construct knowledge, build confidence with writing, and to feel comfortable discussing their writing. Participants were satisfied with using Skype as an instructional tool to supplement their online English composition course.

Further research on Skype's use to improve the learning of underprepared students would provide a more comprehensive understanding of its effectiveness. As the population of student enrollment in online universities increases, these institutions must find ways to increase the retention rate of their nontraditional learners. Therefore, they are tasked with the challenge of addressing the needs of its students and using user-friendly technological tools to help engage learners. A future study might include more participants and a longer course term with more Skype sessions. This type study would strengthen the findings of the current study because it would provide further insight of participants' perception after being exposed to an increased frequency of Skype sessions.

Another study that could assess the effectiveness of Skype to foster learning might be a mixed methods study. A mixed methods study may be helpful at measuring and assessing the effects of Skype on student learning to a greater degree. Such study might examine pre and post writing exam scores or administer pre and post writing samples to obtain an evaluation of Skype's usefulness in improving writing skills. A mixed methods study could compare the development of writing skills of a group of students and instructors who used Skype to a control group that did not use Skype. Additionally, a mixed methods study could include surveys or questionnaires to obtain an analysis of participants' perceptions of Skype sessions.

An ideal study would be a longitude mixed methods study to measure the effects of using Skype as an intervention in the early stages of instructing underprepared students. This type of study would follow a group of students over at least a year after their initial intervention of Skype in their first two to three classes to determine if the use of Skype had any long-term effects on developing critical thinking skills. Student participants in this study expressed that they will continue using Skype for personal and academic purposes and hope to use it in future courses. A longitudinal study that analyzed a group over time may strengthen the results of this study because it may help determine if students continued to apply the skills they acquired and if they continued to use Skype.

Implications

This study presented many positive opportunities for social change and for policy change. It is one of few research studies about the usefulness of Skype to help build

critical writing skills. Finding colleges for this case study was challenging because most online universities were just beginning to incorporate synchronous learning tools and the few that did used a variety of technologies: Adobe Connect, Google Video, Wimba, Elluminate, WebEx, or Skype. This may be the reason there were few studies conducted on Skype as an instructional tool. This study has positive implications for others who have similar experiences.

Social Change

This study has the potential to bring about positive social change for online institutions of higher education that have a high population of underprepared students. Increasingly, universities are deciding to move from on-ground, to blended, and to completely online courses. This transition provides opportunities for more students to seek college degrees because the online learning environment is more accommodating to the nontraditional student. Due to the increased rate of underprepared students entering online universities, colleges and universities look for ways to increase retention rate because the chances of underprepared students dropping out within the first year compared to their counterparts is substantially higher (College Board & Advocacy Center, 2011). Therefore, this study can effect positive social change by showing how underprepared students regard the use of Skype to help enhance their learning of critical writing skills. The results of this case study may inform educational policies and practices of online learning communities.

Recommendations for Practice

For online institutions of higher education to implement Skype, it is recommended that Skype be used as a required supplemental tool to their asynchronous learning environment. Many institutions recommend Skype or some similar synchronous tool, but have no requirements for its use, nor training for faculty and students about its use. In order for institutions to reap the benefits of Skype or any synchronous tool, they must require students and instructors to use it regularly throughout a term.

Additionally, an institution needs to have tight policies in place to document Skype sessions. The case in this study had "relaxed requirements" as one instructor explained because the university had requirements for synchronous communication, but did nothing to enforce the policy or follow up on its use. This resulted in many instructors choosing not to use Skype with their remedial students.

The only factor that my study involved that was not part of the university's plan for synchronous communication was that the sessions be recorded. This turned out to be a valuable tool for both instructors and students because they could review their conversations with students, and have documentation of growth throughout the term. It is recommended that area chairs or lead faculty members require more than a brief write up of the Skype sessions, and that an audio recording of sessions be required for documentation.

Many online university administrators try to marry education and business, often making the mistake of investing large sums of money in the wrong tools. As they try to accommodate student learning, they select expensive technologies, which may go unused

by students and instructors. They may avail students with too many tools until students and instructors become overwhelmed and frustrated. A balance is needed between the education and business side of education in designing and creating accommodating learning environments. Online learning institutions must know and understand their student consumers and exercise prudence in spending money on the learning management systems. Online universities may be able to retain more students and produce higher graduation rates if they realize that many of their nontraditional students are not as tech savvy as they need to be in order to be successful online learners, and that they need the guidance of another person to help with not just learning but with the technologies available. Therefore, online universities need to realize that nontraditional, online undergraduate students will benefit more from having a free or cost-effective, user-friendly tool, such as Skype that allows them the benefit of having the needed human interaction that traditional and on-ground students have.

Conclusion

This qualitative case study provides insight into the perceptions of students and instructors on the use of Skype to improve writing in an online remedial composition course. Administrators in online universities should realize the importance of real-time interactions between students and instructors and consider implementing Skype or similar synchronous tools to aid in student learning. The audio recorded Skype sessions helped to draw a clearer picture of the participants' experiences because they not only helped to confirm what was discussed in the interviews, but revealed effective techniques for scaffolding underprepared students.

Instructors and students perceived the Skype interactions helped them to acquire knowledge and skills. Students saw that they gained confidence, yet their instructors saw that they had grown to become independent, self-regulated learners. Instructors fostered student learning by using Socratic questioning to encourage critical thinking. Students perceived the verbal praise to be supportive and motivating. All participants found Skype to be easy to use. Instructors felt that Skype was an indispensable tool, which was similar to students' belief that Skype was a valuable part of their learning experience. The Skype interactions helped to build a rapport between students and instructors, which as one instructor reported, "Such relationships of empathy and sensibility was (sic) not possible with those who did not take part in the Skype sessions." Students associated the real-time learning of the Skype environment to relevant, practical skills that they could use in their personal lives. Skype enabled an environment beyond student-centeredness; it created an exchange of understanding between the instructor and the student in which the goal was to find "systematic knowledge in the learner's intuition" (Bruner, 1960, p. 18).

Students' candid responses during the interviews also added insight to how their perceptions of the Skype interactions helped to motivate and promote learning. Participants in this study helped instructors realize that students are more than learners; they are consumers of their educational program. Therefore, their voices should be heard and their courses should be tailored to accommodate their needs, even if it means hiring more full time instructors, paying higher salaries, and having smaller class sizes to make it possible for online instructors to have the time to deliver content beyond the asynchronous environment. A learning management system that includes a variety of

tools to accommodate the needs and busy lifestyles of adult learners is beneficial, but it becomes more helpful when students and instructors find the value in them by using the tools in practical ways in their personal, professional, and academic lifestyles. Administrators of online higher institutions of education must make sure the tools of the learning management system are used seamlessly and not “seemingly” by instructors and students.

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Appendix A: Interview Questions

Research Questions	Interview Questions
How do students perceive changes in their writing based on Skype interactions with their instructor?	1. Do you perceive some kind of change in your writing this semester? 2. Can you describe how your writing changed? 3. How did interacting with your instructor through Skype have an impact on your changes in your writing?
How do the instructors perceive changes in the writing of remedial students based on Skype interactions with students?	1. When you reflect on the development of your students' writing skills this quarter, what kind of changes have you observed? 2. Can you please share some examples? 3. How did your interaction with students through Skype affect the changes you observed?

What are the perceptions of the instructors about the effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?	1. Do you think Skype was effective in helping you deliver scaffolding interaction with your students? Why or why not? 2. How was Skype helpful/not helpful in other ways? 3. Do you think students were comfortable using Skype as a learning tool with you? 4. On a scale of one through three; three being highest, two—average, and one—below or poor, how would you rate your students overall ability to use Skype as a result of the Skype interactions? 5. Would you recommend using Skype as a tool to interact with students to help increase their learning? Why or why not?
What are the perceptions of students about the	1. Do you think Skype was an effective tool to help you interact

effectiveness of Skype to scaffold the learning of English composition in a remedial online asynchronous classroom?	with your instructor to improve your writing skills? Why or why not? 2. Explain why you did or did not find Skype effective at acquiring or learning skills that your instructor presented. 3. On a scale of one through three; three being highest, two—average, and one—below or poor, how would you rate your overall ability to use Skype as a result of the Skype interactions with your instructor? 4. Did you feel comfortable using Skype for learning new knowledge or skills? Why or why not? 5. Would you use Skype again as a means to improve your learning? Explain.

Appendix B: Letter of Cooperation

[redacted]
Campus Dean

May 2, 2014

Dear Denise Ogden,

Based on my review of your research proposal, I give permission for you to conduct the study titled Skype as a Scaffolding Tool for Underprepared Freshmen English Composition Students within the University's community. As part of this study, I authorize you to do the following: Contact remedial English Composition instructors and their adult students to recruit, conduct interviews, record Skype sessions, and share data with participants as a form of member checking, and to share broad results of your findings with permission from the participants. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: allowing access to participants and ensuring your rights to protect the confidentiality of your participants. We also extend the use of our facilities to conduct interviews. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Appendix C: Instructor Invitation

To: (Instructor's Actual Name here)
From: Denise Ogden; dogde001@waldenu.edu; XXXXXXXX
RE: Invitation to Participate
Date:

Dear (Instructor's Actual Name will go here),

I would like to invite you to participate in a dissertation research study involving the use of Skype in your class. I am interested in finding out how students perceive the benefit of Skype in learning writing skills.

In order to be a part of this study, you must meet two criteria: (a) be scheduled to teach an online remedial English Composition course in an upcoming mini-term, and (b) use Skype routinely to communicate with your students.

Participation in the study will require that you record two 30-minute Skype conversations with three of your students and share those recordings with me. The Skype conversations should be an ongoing part of your instruction and not require any additional time on your part. Secondly, you will be asked to email me a list of your students and their email addresses so that I can invite them to participate in the study. After student invitations and consent forms have been returned to me, I will email you the names of the first three students that volunteered to participate in the study. At the end of the 6-week term, you will be asked to participate in a one-hour interview with me in which we discuss your usage of Skype and your perceptions of how it helped your students learn writing skills. Up to one week after the study's conclusion, you may need to respond to email asking follow-up questions in order to clarify and to correct information that may have been missing or obscured due to technical glitches.

If you meet the above conditions and would like to learn more about the study, please indicate below and return this email to me. If you would like to learn more information about this study, please contact me.

___Yes, I am interested in this study and will like to learn more information. I confirm that I meet the two conditions above, and understand that more information will be forthcoming.
Thanks for your consideration!

Denise Ogden, Walden University doctoral student

Appendix D: Instructor Consent Form

You accepted my invitation to take part in a research study that explores how students and instructors feel about using Skype in an online course. You were invited to participate because you are an online basic skills English composition instructor who uses Skype to communicate with your online students. If you consent, participation in this study will last the duration of the university's six-week online mini-term, with an extra week for follow-up and member checks. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Denise Ogden, who is a doctoral student at Walden University. You may also recognize the researcher as an instructor from another local university, but this study is separate from that role.

Background Information:
The purpose of this study is to explore and describe how instructors and students feel about the usefulness of Skype to provide quality learning interactions between students and instructors in an online basic skills English composition course.

Procedures:
If you agree to be in this study, you will be asked to:

- Attend a 45-minute meeting with me to discuss logistics of the study and to ensure that mp3 Skype Recorder is installed and working. We will also discuss back-up recording strategies
- Participate in a 10- minute Skype practice session with me using Skype recording software called mp3 Skype Recorder
- Provide me a copy of your class roster that includes students' email addresses
- Record two Skype sessions, which are held as part of your routine teaching requirements, with each student participant, using the mp3 Skype Recorder software
- Email the recorded mp3 files, totaling six, to me at the conclusion of each session
- Participate in a one-hour audio recorded interview at the conclusion of the study
- Respond to any email regarding follow-up questions, up to a week after the study's conclusion, to allow for clarity and correction of missing, inaccurate, or obscured information, which may be caused by technical glitches

Here are some sample questions that might be asked during your interview with me:

1. What kind of changes have you observed of your students' writing development this semester?
2. How did your interactions with students through Skype impact the changes you observed?

3. Do you think Skype was effective in helping you deliver scaffolded interactions with your student?
4. Would you recommend using Skype to your colleagues?

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at XXXX will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue, stress, or frustration. Being in this study would not pose risks. to your safety or wellbeing.

The main benefit of this study is that it will provide documented information of how students and instructors feel about using Skype in their online courses to interact with one another. The results of this study may provide insight into the benefits of verbal interactions between students and instructor in an online course. Your perceptions of using Skype will provide insight to other online learning institutions and instructors on teaching and motivating students to learn.

Payment:
Payment will not be offered for your participation in this study.

Privacy:
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you or your university in the study reports. Data will be kept secure by storing in a locked briefcase, and stored as encrypted files on my home desktop, which is password protected. Codes will be used to replace identifiers. All documents and artifacts that include participant information will be destroyed at the study's conclusion. Coded data and tapes will be kept on a flash drive for a period of 5 years in my safety deposit box as required by Walden University.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone number: XXXXXXXXXX and email address dogden001@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden

University representative who can discuss this with you. Her phone number is 1-612-312-1210.
Walden University's approval number for this study is **07-28-14-0028-28** and it expires on **July 27, 2015.**

Please print a copy of this form to keep for your records.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By replying to this email with the words, "I consent," I understand that I am agreeing to the terms described above.

Appendix E: Adult Student Invitation Letter

To: (Student's Actual Name Here)
From: Denise Ogden; dogde001@waldenu.edu
CC: Instructor; email address
RE: Invitation to Participate
Date:

Dear (Student's Actual Name Goes Here),

I would like to invite you to participate in a dissertation research study involving Skype because you are taking a writing course where your instructor will use Skype for communication with you. I am interested in getting your opinion about the usefulness of Skype in helping you improve your writing skills. As you communicate with your instructor using Skype, you should have a lot of valuable impression about its usefulness in online learning.

Participation in this study will require that you allow your instructor to record and share with me two 30-minute Skype conversations between you and your instructor, which are part of the online course instructional activities. In addition, I would like to have a one-hour interview with you the last week of the term and ask that you respond to possible email regarding follow-up questions, up to a week after the term to allow for clarification and correction of missing, inaccurate, or obscured information. Aside from allowing the Skype interactions to be recorded and sent to me, the one-hour interview, and response to follow-up email, activities in which you will be involved will be a regular part of your course instruction.

You meet the requirements to participate because you are taking an online writing course where your instructor uses Skype for student communication. Two of your conversations with your instructor will be recorded for my review. If you have any questions please contact me using the information contained in the closing below.

If you are interested in the study, please indicate below and return this email to me. If you would like more information about this study, please contact me.

___Yes, I am interested in this study and would like to learn more information. I understand that I am not obligated to participate. My decision to participate is voluntary, and if I decide to participate, more information will be sent to me.

Thanks for your consideration!

Denise Ogden, Walden University doctoral student
Contact Information

Appendix F: Adult Student Consent Form

You accepted the invitation to take part in a research study that explores how students and instructors feel about using Skype in an online course. You were invited because you are enrolled in an online basic skills English composition course with an instructor who uses Skype to communicate with you. If you consent, participation in this study will last the duration of the university's online mini-term, which is six weeks, with an extra week for follow-up and member-checks. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Denise Ogden, who is a doctoral student at Walden University. The researcher is also an instructor at another university, but that role has nothing to do with this study.

Background Information:
The purpose of this study is to explore your feelings about the usefulness of Skype to provide quality learning interactions with your instructor in an online basic skills English composition course.

Procedures:
If you agree to be in this study, you will be asked to:

- Allow the instructor to record and share with me, two 30-minute Skype sessions, which are a normal part of the online course instructional activities
- Participate in a one-hour recorded Skype interview with researcher during week six of the term
- If necessary, respond to any email regarding follow-up questions, up to a week after the study's conclusion, to allow for clarity and correction of missing, inaccurate, or obscured information that may be caused by technical glitches

Here are some sample questions:

5. What kind of changes have you observed in your writing throughout the course?
6. Explain how your Skype interactions with the instructor may have impacted your writing.
7. Do you think Skype was an effective tool in helping the instructor provide you with understanding of the material to enable writing improvement?
8. Would you use Skype in future courses on a voluntarily basis to improve your learning?

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at XXXX will treat you differently if you decide not to

be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as fatigue, stress, or frustration. Being in this study will not pose risks to your safety or wellbeing.
The main benefit of this study is that it will provide documented information of how students and instructors feel about using Skype in their online courses to interact with one another. The results of this study will provide online universities with insight into verbal interaction between students and instructor. Another benefit is that your perception of Skype interactions with your instructor may provide insight into how this interaction helped your motivation and learning.

Payment:
Payment will not be offered for your participation in this study. You will be thanked for your time at the conclusion of the interview.

Privacy:
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by storing in a locked briefcase, and stored as encrypted files on my home desktop, which is password protected. Pseudonyms will be used to protect your identity. All documents and artifacts that include participant information will be destroyed at the study's conclusion. Coded data will be kept in my safety deposit box for a period of 5 years, as required by Walden University.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone number: XXXXXXXXXX and email address dogde001@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-612-312-1210. Walden University's approval number for this study is **07-28-14-0028028** and it expires on **July 27, 2015.**

Please print a copy of this form to keep for your records.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By replying to this email with the words "I consent," I understand that I am agreeing to the terms described above.

Appendix G: Instructor Interview Protocol

Hi, I am Denise Ogden, a doctoral student at Walden University. I am collecting data for my study, Skype as a scaffolding tool for instructors of underprepared freshmen English Composition Students. I appreciate your meeting with me today. This interview will take approximately an hour of your time. Please feel free to ask questions anytime. If you do not mind, our conversation will be recorded so I can review it after we finish.

The first set of questions I am going to ask pertain to your perception of changes in your students writing skills as a result of your interactions with your students through the use of Skype. The second set will pertain to your perception of the effectiveness of using Skype as a tool with your students. I am going to read the interview questions and provide you with a copy of the questions so that you can reread them, if necessary, to help you understand and reflect on them prior to answering.
Now, here goes the first set.

1. When you reflect on the development of your students' writing skills this term, what kind of changes have you observed?

2. Please share some examples.

3. How did your interaction with students through Skype affect the changes you observed?

4. Is there anything else you would like to add that helps to explain how your Skype interactions may have helped to improve your students' writing?

Next is the second set that pertains to your perception of Skype's effectiveness.

5. Explain whether you think Skype was effective in helping you deliver scaffolding interactions with your students.
6. How was Skype helpful and/or not helpful in other ways?
7. Do you think students were comfortable using Skype as a learning tool with you?
8. On a scale of 1 to 10, with 10 being the best, explain your comfort level using Skype to help students improve their writing.
9. Would you recommend using Skype to interact with students to help increase their learning? Explain.
10. Can you think of anything else you would like to add that would help to understand Skype's effectiveness to improve learning in underprepared students?

Do you have any questions at this time? Okay, if you have no further questions or nothing else to add, this concludes our interview.

I appreciate your taking the time to answer the questions. Thank you. Have a nice evening!

Appendix H: Student Interview Protocol

Hi, I am Denise Ogden, a doctoral student at Walden University. I am collecting data for my study, Skype as a scaffolding tool for instructors of underprepared freshmen English Composition Students. I appreciate your Skyping with me today. This interview will take about an hour of your time. Please feel free to ask questions anytime. If you do not mind, our conversation will be recorded so I can review it.

The first set of questions I am going to ask pertains to how you feel your writing has changed based on Skype interactions with your instructor. The second set pertains to how you feel about the effectiveness of using Skype as a tool to help improve your writing. I am going to read the interview questions that interview questions that you have been provided a copy of. If you do not have your questions, let me know if you need to repeat a question.

Now, here goes the first set.

1. Do you perceive some kind of change in your writing this term?

2. Can you describe how your writing changed?

3. How did interacting with your instructor through Skype have an impact on your changes in your writing?

4. Is there anything else you can think of that may help to understand how your interactions with your instructor may have had an impact on your writing?

Next, is the second set that pertains to your perception—how you felt about Skype being used as a tool to help improve your writing.

5. Do you thing Skype was an effective tool to help you interact with your instructor to improve your writing?

6. Explain other ways that you found Skype to be most/least helpful at improving your writing skills?

7. On a scale of 1 to 10, with 10 being the best, explain your comfort level at using Skype to help improve your writing.

8. Would you use Skype again as a means to help improve your learning? Explain.
9. Is there anything else you would like to add that would help to understand how Skype might or might not have been a useful tool in your online learning environment?

Do you have any questions at this time? Okay, if you have no questions or nothing else to add, this concludes our interview.

I appreciate your taking the time to answer the questions. Thank you. Have a nice evening!