THE EFFECT OF ORAL FEEDBACK ON PERCEIVED CLASSROOM COMMUNITY IN UNDERGRADUATE STUDENTS

by

Jennifer L. Boyles, Ed.S.

Liberty University

A Dissertation Prospectus Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The ongoing trend in research regarding feedback has been to explore quantitative assessment. Garnering support more recently is qualitative narrative feedback in support of formative assessment. This type of feedback offers insight into expectations as well as offer additional knowledge gained. It enables students to improve their performance with its timeliness and clarity. Research in the area of oral feedback for college students as a more effective formative assessment and tool for learning is needed. This study examined the effects of oral feedback on the students in four undergraduate courses at a public university in Florida. 68 students were recruited to consent to participate. A quasi-experimental, nonequivalent control groups, pretest/posttest factorial design was planned but a Mann Whitney U-test was ultimately employed due to a failed assumption. Data collected from the Classroom Community Scale was evaluated using Mann Whitney u-tests.

Keywords: social community, oral feedback, written feedback, online education

Dedication

To the one who heard my heartbeat from the inside. Elizabeth, my love for you fuels all of my pursuits.

Acknowledgements

"For who makes you different from anyone else? What do you have that you did not receive? And if you did receive it, why do you boast as though you did not?" (1 Corinthians 4:7, NIV) Thank you to our Heavenly Father who provided me with everything I needed to achieve this goal: a husband who truly is my own flesh (Genesis 2:24, NIV) who loved and supported me while carrying my share of the load at home, parents who trained me up in His way (Proverbs 22:6, NIV), a "soul sister" who paved the way for me and fully understood the challenges as I faced each one providing a sounding board and advice each time as well as "my person" who listens and advises with wisdom and honesty (Ecclesiastes 4:9-10), a dissertation chair who, though I knew her not from the beginning, could not have been a better match serving alongside my other committee members who continually sharpened me with each revision (Proverbs 27:27, NIV), and finally the many friends, family members, and colleagues who provided the encouragement needed to continue to completion the work He began in me (Philippians 1:6, NIV).

Table of Contents

List of Tables

List of Figures

CHAPTER ONE: INTRODUCTION

Background

"Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing pre-packaged assignments and spitting out answers. They must talk about what they are learning…They must make what they learn part of themselves" (Chickering & Gamson, 1987, p. 4). When imagining a college classroom, one likely envisions a physical space where a professor gives a lecture from a podium on material previously read by students engaged in the learning process (Jones, 2011). Afterwards, there is a discussion then, the students dissipate and go about their respective lives. The relationship built among these peers and between the faculty members can develop a strong sense of belonging that leads to persistence (Pichon, 2016).

However, the layout of the college classroom is ever changing. Assignments are often turned in online to be graded and/or given written feedback. Students no longer hand in printed assignments; this limits the opportunity to engage with the professor at the point of submission and at the point of reception of the graded product. Further contributing to this scenario is the dawn of distance education where professors and students may now, alternatively, be virtually present rather than physically present in the learning environment. In 2002, Rovai demonstrated a concern over how this separation of the students from the professor and their peers may impact classroom community and therefore retention. The use of this technology to streamline the assessment process presents challenges including maintaining a sense of teacher presence (Jones, 2011) that contributes to a feeling of classroom community.

One way to bridge this gap is utilizing quality oral feedback (Barney, Khurum, Petersen, Unterkalmsteiner, & Jabangwe 2012). Continuing to use existing technology, but adjusting it to

include recorded oral feedback brings the element of teacher presence back to the assessment process. This process of assessment is one that is regularly examined for adjustment to best practices; Alquraan, Bsharah, and Al-Bustanji (2010) indicated that improvement in higher education could not be achieved without improving assessment practices, in which feedback is a major player.

Educational feedback has been defined as making a judgment about student accomplishment and learning, which when conveyed to the student informs them of how well they have performed (Talib, Naim, & Supie, 2015). This area of primarily quantitative assessment is where feedback began (Brutus 2010; Finney, 2010). However, research has shown that educational feedback can be expanded to refer to knowledge that is passed on to the student to modify their thinking (Shute, 2008). Considering both of these definitions, educational feedback can be understood to mean both an assessment of where the student's learning currently is, as well as adjusting the student's learning to form something original.

Goaverts van de Wiel, and van der Vleuten (2013) described the process of narrative feedback in education as a relationship that begins when a student performs a task. The educator then assesses performance against expectations and converts this assessment into feedback. However, simply giving feedback is not effective, unless the feedback is quality (Beaumont, O'Doherty, & Shannon, 2011; Goaverts et al., 2013) For example, in a study of university students in the United Kingdom, Beaumont, O'Doherty, & Shannon (2011) ranked quality feedback as having offered the least satisfaction for five consecutive years. These students often view the feedback received as not elaborate enough, not timely, and not aiding in understanding of the content (Beaumont, O'Doherty, & Shannon, 2011).

Walker (2009) specifically looked at written feedback and estimated several challenges

including: a student's inability to understand them, terseness due to brevity, and conflicting with the student's viewpoint on the topic. These weaknesses are reflected in students' dissatisfaction with the quality of their feedback. Recognizing these, and other, inherent weaknesses to written feedback suggests that educators consider an alternative that would be of a higher quality (Khowaja, Gul, Lakhani, Rizvi, & Saleem, 2014; Lunt & Curran, 2010; MacDonald, 1991). Rubrics were introduced but also failed to be completely effective as students were not sure of what constitutes a "good" or a "poor" contribution (Barney et al., 2012). Those still looking for a higher quality alternative might consider that verbal feedback has been demonstrated to be more effective than its counterparts as it often yields more clarification and tends to be more elaborate (Black & McCormick, 2010; Brutus, 2010; Govaerts et al., 2013; Jordan, 2004), and it elicits student inquiry and motivates the learning process (Black & McCormick, 2010; Jordan, 2004).

Improving the nature of feedback in higher education will benefit college students at large (Barney et al., 2012). Qualitative feedback is gaining interest in this field due to three primary causes: increased technology easing the burden of narrative feedback, an increased desire to more accurately depict performance, and growing desire from recipients who request clarification in assessment (Brutus, 2010). Furthermore, the growing use of technology in assessment and the ongoing trend of online courses leaves a gap in the interaction between students and professors; closing this gap could increase the perceived value of their courses (Angelopulo, 2013; Jones, 2011; Kilburn et al., 2014; Maher & Macallister, 2013; Rovai, 2002). Student retention, completion, and satisfaction in higher education are areas of current concern (Angelopulo, 2013; Kilburn, Kilburn, & Cates, 2014; Maher & Macallister, 2013), which could improve with more effective feedback yielding a deeper sense of classroom community. This

atmosphere of a classroom community gives internal control to the students, and can be beneficial to classroom management (Fletcher & Baker, 2015). Furthermore, a sense of classroom community can lead to increased student engagement, which motivates deeper learning (Fletcher & Baker, 2015; Jones, 2011; Lijia, Atkinson, Christopherson, Joseph, & Harrison, 2013).

The concept of obtaining feedback for the purpose of learning is grounded in two educational theories: constructivist learning theory and social learning theory. Examining both of these theories together builds the groundwork for the importance of oral formative feedback in higher education. Piaget (1972), founder of the constructivist theory, explained how knowledge is constructed continuously and is revised as new experiences are encountered. Educational best practices note that action without assessment is not productive for students (Beaumont, 2011). The assessment is what allows a student to revise their learning. The goal of narrative feedback is to give the recipient new knowledge, which they assimilate into their existing knowledge, that increases both their learning and their performance (Barney, 2012; Beaumont, 2011). If this knowledge is given orally the student can make inquiries to further the dialogue. Rather than simply adjusting their thinking to align with the feedback, they are possibly now capable of expanding their thinking beyond the feedback. Constructivism allows students to extend their learning beyond that of what is being directly presented (Talib et al., 2015), and oral feedback, especially through formative assessment, offers the opportunity for this construction of additional knowledge (Beaumont, 2011). A constructivist learning environment will also benefit society at large as students familiar with this type of educational feedback will then enter society with a willingness to accept criticism from employers, clients, colleagues, etc (Brutus, 2010).

Vygotsky furthered constructivist theories with his work in social development theory.

Social development theory expands to include the role that other people play in development (Vygotsky, 1978). This brings to the forefront the element of teacher presence and classroom community and their impact on learning. Bandura (1977) also worked with the social development theory and described how motivation impacts learning. Successful classroom community develops more engaged and motivated students (Fletcher & Baker, 2015; Jones, 2011; Wendt, 2015) enabling them to improve their learning. Oral feedback is the educator's opportunity to give positive reinforcement that teaches while simultaneously encourages. Using this strategy, even in asynchronous learning networks, can benefit education.

Lijia et al. (2013) demonstrated how social interaction is necessary to access deeper processing abilities. This idea also originated with Vygotsky (1978) who described the zone of proximal development as the process whereby educators assist their students with attaining a task or concept that they could not understand independently. Vygotsky (1978) argued that language is the primary tool to support thinking and reasoning. The language interaction between the educator and the student are of utmost importance (Talib et al., 2015). This technique promotes the student to being able to independently complete this task in the future when it was not previously possible. The knowledge obtained from oral feedback is the link connecting the student to his or her highest potential (Beaumont, 2011; Black & McCormick, 2010; Lijia et al., 2013).

Problem Statement

Quality feedback is a critical element of learning (Barney et al., 2012; Govaerts, van de Wiel, & Van der Vleuten, 2013; Sobhani, & Tayebipour, 2015; Van der Vleuten, Schuwirth, Scheele, Driessen, & Hodges, 2010). Contrary to previous work that focused on quantitative feedback (such as grades), current research recognizes that quality qualitative feedback (such as

comments) is necessary to improve performance rather than merely assess it (Brutus, 2010; Finney, 2010; Govaerts et al., 2013). Research demonstrates that written feedback has multiple setbacks preventing it from achieving its goal (Jordan, 2004; Khowaja et al., 2014; MacDonald, 1991; Van der Vleuten et al., 2010). Further research shows that higher education suffers from a lack of interaction and could benefit from improved relationships that could increase the perceived value of the courses (Angelopulo, 2013; Jones, 2011; Kilburn et al., 2014; Maher & Macallister, 2013). Furthermore, Schmidt et al. (2014) found an anxiety-reducing benefit to oral feedback. With recent foci placed on student retention, completion, and satisfaction in higher education (Angelopulo, 2013; Kilburn, Kilburn, & Cates, 2014; Maher & Macallister, 2013), further research on oral feedback's effect on perceived social community is necessary. Many studies have examined oral feedback (Barney et al., 2012; Brutus, 2010; Lunt & Curran, 2010; Schmidt et al., 2014; Sobhani, 2015), and several have examined classroom community (Fletcher & Baker, 2015; Jones, 2011; Wendt & Rockinson-Szapkiw, 2015); however the effect of oral feedback on classroom community has not yet been fully vetted.

Barney et al. (2012) as well as Sobhani (2015) reviewed whether oral feedback improved academic performance but did not research the impacts of oral feedback on a sense of community. Likewise, Lunt and Curran (2010) compared oral feedback to written feedback in college courses and found it to be preferred, but did not consider oral feedback's impact on classroom community. As a sense of community has been established as prudent in the field of education, it is important to consider ways to improve it (Fletcher & Baker, 2015; Jones, 2011; Pichon, 2016; Wendt & Rockinson-Szapkiw, 2015) Alternatively, several studies (Fletcher and Baker, 2015; Jones, 2011; and Wednt & Rockinson-Szapkiw, 2015) examined classroom community/teacher presence and its importance but did not research whether or not oral

feedback would have an effect on it. The problem is that oral feedback research has not fully examined its impact on perceived social community in higher education.

Purpose Statement

The purpose of this quasi-experimental, pretest posttest, non-equivalent groups design was to examine the effect of oral feedback on perceived classroom community in undergraduate students at a public university. From the population of 46 students in two sections of an online course and 69 students in three sections of an in-residence course, a convenience sample of 68 students was used. The convenience sample consisted of 22 online students and 46 in-residence students. The type of feedback given, oral or written, served as the independent variable. Oral feedback is a verbal response from an educator that provides information to students regarding their performance (Alquraan et al., 2010). In this study, the oral feedback was verbal comments recorded and emailed to the student. Written feedback was typed comments provided by the professor using Microsoft Word's track changes and commenting features on their written assignment regarding the student's performance. In this study, the written feedback was also be emailed to the student. Additionally, the independent variable of the mode of delivery, online or in-residence, was examined to determine if the effects of the feedback differed among these students. The perceived classroom community as measured by the Classroom Community Scale (CCS) (Rovai, 2002) served as the dependent variable. The pretest results from the CCS served as the covariate, accounting for the varied existing perceived classroom community. Classroom community is defined by Rovai (2002) as the connectedness students feel from their sense of duty and obligation to each other, and to their school, to aid in meeting their shared educational goals. More recently, classroom community has been viewed as the atmosphere of a classroom that promotes responsibility, risk-taking, help seeking, and concern for others (Fletcher & Baker,

2015). This study added research to the areas of feedback in higher education and social community in undergraduate classrooms.

Significance of the Study

This study took the work of Jones (2011), who defined teaching presence in a college classroom and expanded it to determine how that presence is affected by oral feedback and how that change may alter perceived social community. It also considered the research already conducted on oral feedback in college classrooms (Barney et al., 2012; Lunt and Curran, 2010; Sobhani, 2015) and examined whether or not there is a link between the type of feedback received and the perception of classroom community which connected to the existing research on classroom community (Fletcher and Baker, 2015; Jones, 2011; and Wednt & Rockinson-Szapkiw, 2015). Furthermore, the results were compared with the separate modes of delivery to determine if the effect differed between online and in-residence courses. This study also added to the work of Alquraan et al. (2010) who recommended professors use a variety of feedback methods. Also, this study looked further into how Classroom Community is impacted, following up on the research of Rovai and Wighting (2005). This research added to the social development theories of Bandura (1977) and Vygotsky (1978).

The findings of this research on feedback could impact the quality of education (Barney et al., 2012; Brutus, 2010; Lunt & Curran, 2010; Schmidt et al., 2014; Sobhani, 2015) in higher education at large (two and four-year colleges and universities). The results demonstrated whether or not there is an effect on perceived social community from the use of oral feedback in college courses. Implementing a new normal that benefits the area of feedback for higher education would take a giant step forward in improving the quality of education received (Barney et al., 2012; Brutus, 2010; Lunt & Curran, 2010; Schmidt et al., 2014; Sobhani, 2015).

Furthermore, improving feedback could impact social community in higher education could improve engagement and thus learning (Fletcher & Baker, 2015; Jones, 2011; Wendt, 2015). Universities who recognize the need for quality feedback and social community in online courses could be positively impacted; this study aided them in the consideration of making improvements in these areas.

Research Questions

The following research questions were proposed for this study:

RQ1: Is there a significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback while controlling for pretest scores?

RQ2: Is there a significant difference in perceived classroom community scores, as measured by the CCS, between online and in residence undergraduate students while controlling for pretest scores?

Null Hypotheses

The following null hypotheses were proposed for this study:

$H_0$1: There is no significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback while controlling for pretest scores.

$H_0$2: There is no significant difference in perceived classroom community scores, as measured by the CCS, between online and in residence undergraduate students while controlling for pretest scores.

Definitions

1. *Classroom Community Scale (CCS)* - an instrument designed to measure perceptions of classroom community (Rovai, 2002).
2. *Classroom Community* - the connectedness students feel from their sense of duty and obligation to each other, and to their school, to aid in meeting their shared educational goals (Rovai, 2002).
3. *Social Community* - feelings of spirit, cohesion, trust, safety, trade, interdependence, and sense of belonging (McMillan & Chavis, 1986).
4. *Learning Community* - feelings of shared group norms and satisfaction of educational goals being met through the group (McMillan & Chavis, 1986).
5. *Oral feedback* -verbal response from an educator that provides information to students regarding their performance (Alquraan et al., 2010).

CHAPTER TWO: LITERATURE REVIEW

Introduction

Galileo Galilei is attributed as having said, "You cannot teach a man anything. You can only help him find it within himself." Educators, especially those in higher education, are in a continuous state of aiding students with finding their own learning. Rote memorization is not effective or engaging; self-discovery guided by a trained facilitator, however, is both (Fata-Hartley, 2011). Following the guidance of previous research, many college classrooms are shifting to a more learner-centered approach (Fata-Hartley, 2011). This learner-centered approach focuses on letting the student guide the learning. The process of leading another person into self-discovery involves many steps; one method educators may employ to accomplish this is through utilizing feedback opportunities. As a student is engaged in the classroom there are ongoing openings for feedback from the instructor.

Educational feedback has been defined as making a judgment about student accomplishment and learning (Talib, Naim, & Supie, 2015). This is where an educator assigns a score to an assignment or course, which numerically represents the performance and/or learning that has occurred thus far. It identifies the gap between the students' performance and a professor's expectations (Khowaja et al., 2014). This reference point lets the student and others know how their performance relates in comparison to peers. It does not necessarily indicate what was done correctly or what areas need improvement. Educational feedback has also been described as, "information communicated to the learner that is intended to modify his or her thinking or behavior for the purpose of learning" (Shute, 2008, p. 154). This meaning allows the educator to use feedback less as a descriptor and more as a platform for further education. This type of feedback more specifically indicates what part of the performance was correct and what

areas need progress. Combining these two ideas, educational feedback can be understood to mean both an assessment of where the student's learning is at present (Khowaja et al., 2014; Talib, Naim, & Supie, 2015) as well as presenting new knowledge that can adjust the student's learning and form something original (Shute, 2008). In order to accomplish this more than a grade must be given in the assessment process so that the information from the gap can be filled in (Brutus, 2010; Finney, 2010; Govaerts et al., 2013).

Considering that perspective, it is widely accepted that quality feedback is a critical element of learning (Barney, Khurum, Petersen, Unterkalmsteiner, & Jabangwe, 2012; Elnicki, Layne, Ogden, & Morris, 1998; Govaerts, van de Wiel, & van der Vleuten, 2013; Sobhani, & Tayebipour, 2015; Van der Vleuten, Schuwirth, Scheele, Driessen, & Hodges, 2010). However, in order to be considered quality, the feedback must meet at least two criteria. The first of which is being received within a time frame that allows the feedback to be useful (Ende, 1998; Jordan 2004; Talib et al., 2015). Timely feedback allows the student to use the feedback for additional learning rather than assessment alone. If feedback is provided too late it is not available to be applied to the performance.

Quality educational feedback must also be clear enough to be helpful and identify future targets (Brutus, 2010; Ende, 1998; Govaerts et al., 2013; Talib et al., 2015). Vague feedback does not inform the student of where their learning went awry. Likewise, it does not distinguish what areas of the performance were acceptable or excellent. Receiving quality feedback allows a student to piggyback off of the wisdom of others, namely their professors. Newton (1676) said, "If I have seen further than others, it is by standing on the shoulders of giants." This is a demonstration of the positive relationship between the outcomes from student learning and the feedback that was provided to them. College professors are therefore encouraged to use different

types of feedback in an effort to supply to most opportunities for learning as possible (Alquraan et al., 2010; Van der Vleuten et al., 2010).

The most common educational feedback and the only one typically required by schools is the assigning of a numeric grade. In higher education, many professors additionally supply written feedback in the form of comments on assignments. This provides justification for the grade assigned (Khowaja et al., 2014). However, the study by Khowaja et al. (2014) revealed that written feedback might not be utilized by students due to the limitations involving timing, quality, and clarity of the feedback. Recognizing the weaknesses inherent to written feedback encourages educators to consider an alternative (Khowaja et al., 2014; MacDonald, 1991). For example, Jordan (2004) realized that adding oral feedback to written comments allowed students to understand and be more encouraged by the feedback than with written feedback alone. Students also appreciated the one on one nature of the orally recorded feedback. Offering both written comments and orally recorded feedback accommodates more than one learning style and offers more opportunities for clarity. Jordan (2004) noted that this clarity from oral comments is obtained due to being able to elaborate more quickly with the spoken word. Furthermore, students are more likely to ask additional questions for clarity due to these elaborations. More recently, Auld, Ridgeway, and Williams (2013) also concluded that their oral feedback gave more in-depth responses to their criteria for assessment.

Improving course feedback adds to student satisfaction. In fact, quality oral feedback meets two of the seven principles for good practice in undergraduate education suggested by Chickering and Gamson (1987). These authors encourage contact between students and faculty and giving prompt feedback among five other principles for good practice. Regular contact with a professor was deemed a primary factor for students' motivation and involvement (Chickering

& Gamson, 1987). Additionally, Chickering and Gamson (1987) showed that receiving prompt feedback focused students' learning and gave opportunity for reflection. With recent foci placed on student retention, completion, and satisfaction in higher education (Angelopulo, 2013; Kilburn, Kilburn, & Cates, 2014; Maher & Macallister, 2013), further research on a component of this importance is necessary. In an effort to improve learning among students in institutions of higher education, future studies should endeavor to examine the area of oral formative feedback.

In the last few decades, online learning has been a growing trend (Ashong & Commander, 2012; Yang, Cho, Mathew, & Worth, 2011) especially for students seeking scheduling flexibility (Ashong & Commander, 2012; Pastore & Carr-Chellman, 2009). However, with this alternative mode of delivery comes a sacrifice in the feeling of classroom community (Ashong & Commander, 2012; Baker, 2010; Muilenburg & Berge, 2005; Mullen & Tallent-Runnels, 2006; Pigliapoco & Bogliolo, 2008; Vavala & Namuth-Covert, 2009). As the benefits of classroom community have already been demonstrated in extensive research (Baker, 2010; Engstrom, Santo, & Yost, 2008; Kay, Summers, & Svinicki, 2011; Polnick, Ritter, & Fink, 2011; Ritter, Polnick, Fink, & Oescher, 2010), it is imperative that factors that may improve this important component in the online classroom be considered, such as the type of feedback received, to determine if it differs from the needs of students participating in in-residence courses.

Theoretical Framework

The giving and receiving of oral feedback is grounded in two learning theories: constructivist learning theory and social learning theory. Combined, these two theories lay a critical foundation for quality oral formative feedback in undergraduate education. Oral

feedback is important to the revision of learning through the interaction with more knowledgeable others.

Constructivist Learning Theory

The constructivist learning theory, founded by Jean Piaget, supports oral feedback. Piaget (1972) believed that knowledge is constructed continuously and is in a constant state of revision as new experiences arise. When one encounters someone who is more knowledgeable or some new event, learning can occur. Alt (2015) demonstrated that constructivist learning theory principles implemented in college courses raise the students' self-efficacy for learning by studying students in both project based learning and traditional lecture classrooms. The results showed higher motivation and academic achievement in those students participating in the constructivist style classrooms. This approach allowed students to believe in their own abilities to construct knowledge.

Piaget (1972) further proposed that the construction of new knowledge only occurs when it is assimilated or accommodated into existing knowledge. Assimilation occurs when new knowledge is viewed through the lens of the existing knowledge structures. Accommodation occurs when new structures are built in the learner to support the new knowledge (Barrett & Long, 2012). This is the goal of narrative feedback, to give the recipient new knowledge that they may incorporate into their existing knowledge in order to increase their learning and likewise their ability to perform. Learning is most powerful when the student finds importance in understanding the knowledge (Barrett & Long, 2012). Written feedback does allow the student's knowledge to grow; however, it yields an immediate end to the conversation. Giving this new knowledge in an oral format instead allows it to become a growing discussion. The student can make inquiries to further the dialogue and expand their learning even more.

In the constructivist learning theory, educators do not merely transmit knowledge; rather they organize the activity of it (Barrett & Long, 2012). Constructivism allows students to extend their learning beyond that of what is being directly presented (Talib et al., 2015). Without feedback, students only absorb information just enough to perform at their desired level for their quantitative assessment. Feedback, however, allows students the opportunity to adjust their understanding of knowledge with the new information they have been given (Talib et al., 2015). They are then able to transition this new knowledge into improved performance in future endeavors or to accommodate this new knowledge with additional information from ongoing feedback. Mensah (2015) explored the use of constructivist learning environments in college courses and found undergraduate students have a preference for its use. Likewise, Semerci and Batdi (2015) found that constructivist learning yields a positive effect on college student academic success, retention, and attitude.

Social Development Theory

Lev Vygotsky furthered constructivist theories with his work in social development theory. Social development theory goes beyond constructing meaning from one's environment and extends to the role that other people play in that development. Vygotsky (1978) believed that individuals acquire knowledge by interaction with others who are more knowledgeable. This new knowledge is then extended and applied to further social interactions. The theory of social learning continued to be supported over the years, in every decade, by a variety of researchers (Hill, Song, & West, 2009; Palincsar & Brown, 1984; and Wertsch & Bivens, 1992). Ma and Yuen (2011) similarly defended the social aspect of learning by attributing knowledge to the negotiation of a group of individuals who reach a consensus. Dialogue and reflection are just

two of the ways they reveal for a learner to participate in social interactions in order to gain knowledge.

Bandura (1977) also worked with the social development theory and described the learning process as happening in four levels: attention, retention, reproduction, and motivation. The final level of motivation is where oral feedback can become a major player. This is the educator's opportunity to give positive reinforcement that teaches while simultaneously encourages. A relationship is then built on trust having gone through a communal experience. Furthermore, (Ma & Yuen, 2011) revealed that social attachment, formed from regular and meaningful contact, also serves as a motivator. Lijia et al. (2013) demonstrated how social interaction is necessary to access deeper processing abilities. Their study utilized animated agents to deliver the feedback but proved a positive relationship from social interaction due to the use of an animated agent who delivered elaborate feedback. Halm (2015) found a connection between this social development and engagement in college classrooms.

Vygotsky (1978) argued that language is the primary tool that supports thinking and reasoning. The language interaction between the educator and the student are of utmost importance. The giving and receiving of oral feedback is paramount to the zone of proximal development. Known as scaffolding, educators are able to assist students with reaching an otherwise unattainable task or concept while allowing them to do as much independently as possible (Talib et al., 2015). This technique promotes the student to being able to independently complete this task in the future when it was not previously possible. The educator becomes the facilitator who guides a student to insights rather than dictating the exact knowledge to be absorbed (Evans, 2013). Using this method, educators should assign the most difficult task the student is capable of with assistance, and then offer the minimal amount of assistance to allow

the task to be accomplished independently (Wass & Golding, 2014). The information gleaned from oral feedback from an instructor is the missing piece between a student's current performance and the preferred performance of which they are capable. Applying feedback from professors allows students to learn to their fullest ability while challenging them to think and perform independently.

Related Literature

Until recently, researchers have concentrated on the area of quantitative feedback (Brutus, 2010; Finney 2010). In most organizations, this is a numerical rating given for performance appraisal. In the world of education, it is not all that different, as educators are responsible for assigning grades as a summative assessment (Glazer, 2014). This numerical assessment is varied within and between institutions and limiting, as it does not imply what was done or what corrections could be made (Van der Vleuten et al., 2010). After solely viewing a grade a student is still unaware of specific mistakes or areas of weaknesses. This makes sense only when you consider that assessment is predominately used for administrative purposes (Brutus, 2010). In most organizations, performance appraisals are used to determine: salary, bonuses, raises, awards, promotions etc. However, educators are not exclusively, or even primarily, administrators. The position of educator far exceeds that of rater.

Qualitative Feedback

It is currently being recognized that feedback beyond the quantitative nature is necessary to improve performance rather than simply assess it (Brutus, 2010; Finney, 2010; Govaerts et al., 2013). Educators must consider the value of formative feedback, giving ongoing assessment throughout the learning process. This qualitative formative feedback, typically in the form of comments, is gaining interest primarily due to three causes: an increase in technology easing the

burden of narrative feedback, an increased desire to more accurately depict performance, and growing appeal from recipients who desire interpretations and/or clarifications of their assessment (Brutus, 2010).

Goaverts et al. (2013) described the relationship between narrative or qualitative, feedback as a cycle that yields an improved performance that is then reassessed and information is given in the form of feedback to repeat the cycle. In the world of education, this relationship begins when a student performs an assigned task. The educator will then make a judgment on their performance, assessing it against expectations. This assessment will be converted into feedback for the student to apply in future performances where the cycle can then begin again as often as is necessary for successful completion. Feedback applied to future assignments will yield greater success in fewer attempts. A summative quantitative grade is still assigned at the end of each course, but qualitative assessment can accompany it in order to perpetuate the learning cycle.

Giving formative student feedback alone is not sufficient for garnering the desired results; educators must endeavor to bring their feedback up to a level of quality (Eraut, 2006; Glazer, 2014; Voelkel & Mello, 2014). Quality feedback includes the following components: timeliness (Brearley & Cullen, 2012; Ende, 1998; Glazer, 2014; Jordan 2004; Talib et al., 2015), specificity (Brutus, 2010; Ende, 1998; Glazer, 2014; Govaerts et al., 2013; Talib et al., 2015; Voelkel & Mello, 2014), objectivity (Ende, 1998), ability to be remediated (Barney et al., 2012; Ende, 1998; Jordan, 2004; Van der Vleuten et al., 2010), and goals (Ende, 1998; Govaerts, et al., 2013; Jordan, 2004). Feedback that is timely allows it to be utilized for the next phase of performance. If the student is expected to perform again prior to receiving feedback on the former performance the knowledge from that assessment cannot be used to improve performance

and the cycle fails. Feedback that is specific allows the student to know the exact areas of weakness that need improvement. Objective feedback lends credibility to the assessment. The feedback must be given in an area that has the ability to be remediated so that a change is possible to make; students can become frustrated with feedback that is not fixable. Quality feedback includes goal setting for the student to know their future direction.

Quality of feedback has received the lowest scores of satisfaction in five consecutive years of the UK National Student Survey (National Student Survey 2005, 2006, 2007, 2008, 2009). They were particularly low in satisfaction for the category that rated how the feedback was able to clarify for them the material that they did not understand. Students viewed the feedback they did receive as not elaborate enough, not timely, and as not helping them refine their understanding of the subject matter (Beaumont, O'Doherty, & Shannon, 2011). Contrarily, the educators believed the feedback to have succeeded in its goal if it both conveyed and enriched the student's performance. With these divergent perspectives and inconclusive definitions of what constitutes conveying and enriching, an effort was made to more succinctly define the quality feedback process.

Feedback Cycles

Beaumont et al. (2011) developed a model called the Dialogic Feedback Cycle that begins with students and educators bringing their prior experience with them to the learning opportunity. Then an assignment is made and preparatory guidance is given with a full explanation of expectations and criteria to be met. Modeling of the task occurs along with examples of excellence as well as an establishment of the target grades. Ongoing throughout the task is in-task guidance, which can be in the form of either pre-assessment tips or peer suggestions. Once the assignment has been submitted it reaches the performance feedback stage

where it is assessed against the standards that were set and discussed for moving forward with future assignments and/or courses. This becomes the prior knowledge that will begin the cycle over again before each new assignment. This last step is supremely important; students want their assessment information to be relatable to future work (Brearley & Cullen, 2012). It is crucial that this model be followed for ongoing and formative feedback, not just summative assessment that will no longer be needed. Following this model with timely and elaborate feedback will yield students with a better understanding of the areas in which they need to improve.

Brearley and Cullen (2012) developed a similar model, called the Feed Forward Model, that differs slightly in its less ongoing assistance from the educators throughout the practice and drafting phase. Their model still focuses on the mentality of taking the assessment on to future endeavors. In their model, the assignment is given and students work independently for the first draft. Formative feedback is then offered from their draft work and students work independently again to make adjustments and complete their work. After submission of the completed work a summative assessment is conducted and the knowledge from that feeds forward into their future work. This model may be more workable for a college classroom setting, which may not allow for a higher quantity of ongoing in-task guidance.

Written Feedback

MacDonald (1991) reviewed the notion of written feedback and delineated multiple negative issues that stem from it including: confusing comments that can be misunderstood, superficial comments focusing on unimportant errors, students not reading the comments, and students not applying the comments to future work. Later, Walker (2009) continued this research and discovered similar weaknesses including: lack of usability due to misunderstanding,

terseness due to brevity, and lack of usability due to a contradiction in the student's conception of the material. Most recently Voelkel and Mello (2014) noticed that written feedback is viewed by students as either: too brief, too general, not applicable to future assignments, or confusing. Additionally, they determined that forty percent of students studied had trouble deciphering written comments.

Students who fail to apply their comments to future endeavors may be due, in part, to the discovery that assessment is trivialized when there is no learning value (Jordan, 2004; Van der Vleuten et al., 2010; Voelkel & Mello, 2014). In other words, students do not value the feedback if a quantitative assessment has been assigned and no further study or assignments of the material will directly occur. Khowaja et al. (2014) also suggested several reasons preventing students from applying the feedback they received. These reasons include: the manner in which the feedback is given, both the timing and the quality of the feedback, the students lack of ability to completely comprehend the feedback coupled with their inability to clarify the feedback, inferior grades received on assignments, and diverging opinions on the feedback received. To further consider why students do not apply their received comments, researchers offer that in order to be considered useful, a comment must not simply point out the gap in understanding but also present ways for the gap to be closed (Voelkel & Mello, 2014; Walker, 2009).

Additionally, written feedback tends to be more negative and critical of errors rather than focusing on positive aspects that were performed well (Jordan, 2004; Talib et al., 2015). Voelkel and Mello's (2014) study revealed that while both audio and written feedback has content as their primary category of comment, audio feedback has motivational comments as the second most used category. Meanwhile written feedback had very few motivational comments and listed writing issues as its second most used category. Motivational comments only accounted

for twenty percent of the total audio comments, yet this increase over the written comments accounted for fewer students in this group desiring more commentary on what they had done well.

Rubrics were introduced as a way to better explain expectancies. Rubrics provide a list of expectations as well as a method for assessing what level of development those expectations were or were not met (Barney et al., 2012). The assessment method is typically a set of qualitative terms ranging in possibilities from excellent to unacceptable. However, students were not always certain of what constitutes a "good" or a "poor" contribution and therefore were unable to identify what their quantitative grade might be ahead of time (Barney et al., 2012). Rubrics are still currently being researched and have proven to have some benefits: however, there are some areas that simply cannot be covered by a rubric. For example, in Huang and Gui's (2015) study English as a Foreign Language students benefited from the use of rubrics, yet there was a minimum impact on their linguistic accuracy. This is a weakness in rubrics, as some categories will inherently not allow students to self-assess prior to submission. Something additional is still lacking that quantitative assessment, written feedback, and rubrics do not appear to cover. There is an additional category of feedback that can be considered to reduce the weaknesses prevalent in the aforementioned methods.

Oral Feedback

In a study by Sobhani and Tayebipour (2015), it was concluded that oral feedback was more effective than written feedback for Iranian EFL students and noted that written feedback can be improved with the addition of oral feedback to compliment it. Perhaps this is due, at least in part, to the discovery that verbal feedback often yields more clarification than its written counterpart, as it tends to be more elaborate (Jordan, 2004; Brutus, 2010; Govaerts et al., 2013;

Voelkel & Mello, 2014). Voelkel and Mello (2014) determined that audio feedback comments contained twelve times more words than their written counterparts. Many times, these additional details will elicit student inquiry, as they are motivated to learn from their performance (Jordan, 2004). Black and McCormick (2010) also believe oral feedback to be superior to written when it comes to higher education for the reason of this additional clarification, which can guide students towards independent learning.

Blair and McGinty (2010) discovered that the majority of higher education students want verbal feedback after exams and before submitting their assignments. Jordan (2004) saw only four out of sixty-six higher education students who said they did not prefer oral feedback to written feedback. Students are ten times more likely to open an audio file than they are to retrieve their written comments (Lunt & Curran, 2010). In Voelkel and Mello's 2014 study involving a group of students receiving audio feedback and a group of students receiving written feedback, they determined that students in the audio feedback group were more satisfied with both the amount and the clarity of the feedback they received than those in the written feedback group.

A disconnect appears to exist between the students' desires and the professors' lack of inclination to prepare it. Yet, oral feedback may actually require less time from the professor (Gibbs and MacDonald, 2003; Lunt & Curran, 2010; MacGregor, Spiers, & Taylor, 2011). This is not terribly surprising as typically one can speak faster than one can type. In fact, Lunt and Curran (2010) estimate that one-minute spent recording oral feedback was equivalent to six minutes spent typing written feedback. Additionally, educational technology is able to improve the time spent on these interactions in college courses (Brearley & Cullen, 2012; Ma & Yuen, 2011).

Contrarily, Voelkel and Mello's (2014) study determined that audio feedback took five minutes longer per students. However, they argued that one must consider the efficiency of the method rather than just the time spent as it has already been demonstrated that the quality of the audible feedback was higher. When examined this way, they discovered that audio feedback is exponentially more efficient as they were able to produce an average of thirty-four words per minute using audio feedback compared to an average of only four words per minute using written feedback. Therefore, ultimately audible feedback is the better use of educator's time as it produced more and better feedback per minute spent.

Several researchers found that oral feedback was perceived as more personal and individualized by students (Jordan, 2004; Lent & Curran, 2010; Voelkel & Mello, 2014). Students generally viewed this personalization as positive and more engaging. This is an area that is lacking in higher education (Jones, 2011). Maintaining a relationship even when separated is crucial to enrollment and retention (Angelopulo, 2013). Likewise, a supportive learning community beyond lectures and into informal interactions is a critical component to student success (Maher & Macallister, 2013). Students from Brearley and Cullen's (2012) study valued their formative audible feedback so much so that they listened to it an average of three times. Furthermore, perceived value, which includes learning acquired from professors, is vital in determining student retention and satisfaction (Kilburn et al., 2014). The students involved in Brearly and Cullen's (2012) study were asked to write down two to four words to describe their experience with audible formative feedback and the most dominant word choice was helpful. The incorporation oral feedback may add to the perceived value held by students of their respective institutions.

Reduced anxiety was an additional benefit to oral feedback found in medical students (Schmidt, Freund, Alves, Monsel, Labbe, Darnal, & Duguet, 2014). In their study, medical students were divided into an intervention group who received oral feedback on their performance through a videotaping and a control group who did not receive formal feedback. The intervention group not only made more significant academic gains, they also reported lower levels of anxiety regarding future performances. Traditionally anxiety regarding these types of presentations only abates after many years of experience (Schmidt et al., 2014). Alleviating this anxiety earlier will aid in the prevention of future mistakes. This reduction of anxiety could be advantageous to students in other career fields as well.

A number of researchers fear that the onset of technology to implement digital classrooms may inhibit learning due to students' lack of ability to have additional personal face-to-face time with instructors (Jones, 2011). When utilizing asynchronous education, feedback becomes even more pertinent. A primary function of an educator is assessment and an effective teacher uses assessment to motivate their students to learn while including them in the learning process (Eyal, 2012). In order to accomplish this, there must be a dialogue. In Brearley and Cullen (2012), students who received formative audible feedback prior to an assignment deadline often engaged with their professor in following email dialogues. There are a variety of ways to accomplish this from phone calls, to video conferencing, and including recordings. Rovai (2002) believes that community should be viewed as the activities people do together, rather than by the means to complete them. He adds further, that a variety of interactive media can be used to accomplish learning goals through social and intellectual encounters.

In an attempt to include oral feedback in a course without having it come from a professor, Lijia et al. (2013) studied the effects of an animated pedagogical agent giving oral

feedback. They discovered that students working with the agent who provided elaborate oral feedback fared better academically than those students who worked with an agent who provided only simple oral feedback. The positive outcome from this study, along with the potential for teacher presence as established by Jones (2011) encourages future research. The learners perceived the animated pedagogical agent as a social interaction (Lijia et al., 2013). It is theorized that the more elaborate the oral feedback was, the more this social interaction activated the students' deep processing necessary for learning.

Classroom Community

This or other types of social interaction is critically important because feelings of disconnectedness are a contributing factor in higher dropout rates, as it reduces the sense of community needed to persist in a college program (Rovai, 2002). Community is defined as ‘‘a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan & Chavis, 1986, p. 9). Community in a classroom can, therefore, be attributed to feeling a sense of belonging to the class and feeling a shared commitment to learning the content. These feelings can arise from student interactions, but also from interactions with the professor as well. They are as Vygotsky (1978) termed them, the more knowledgeable others in the setting. The professor is a participant in the activities accomplished and can add to or take away from the feeling of community-based on their action or inaction.

Several studies have indicated that this classroom community is reduced with an online mode of delivery (Artino, 2008; Muilenburg & Berge, 2005; Mullen & Tallent-Runnels, 2006; Pigliapoco & Bogliolo, 2008; Sapp & Simon, 2005; Tanner, Noser, & Totaro, 2009; Vavala & Covert, 2009; Yang, Cho, Mathews, & Worth, 2011). Vavala and Covert (2009) considered that

many of the immediacy behaviors of professors such as using inclusive pronouns and asking for feedback can be duplicated in an online classroom, yet many non-verbal behaviors that cannot be duplicated such as tone of voice, eye contact, and smiling can impact the students perception of classroom community resulting in feelings of isolation. The results of their study (2009) confirmed that the students did not have as high of a sense of classroom community as their counterparts in the in-residence classrooms. The participating professors in the online courses also agreed that the measures taken to include classroom community were not satisfactory (Vavala & Covert, 2009). Smart and Cappel (2006) also noted that online learning can result in learner isolation and frustration. Their study suggested considering a blended learning environment that includes both online elements and traditional in-residence portions to eliminate the concerns of an online classroom.

However, other researchers have found that online learning can be as effective at producing classroom community as in-residence courses (Pastore, Carr-Chellman, 2009; Song, Singleton, Hill, & Koh, 2004; Vafrlejs, 2003) due to its strengths in flexibility, anonymity, and technology. Ashong and Commander (2012) proffered that it may be factors beyond just mode of delivery that impacts the perception of classroom community such as gender and ethnicity. Their study (2012) indicated that females have a higher perceived classroom community in an online environment. Classroom community has a myriad of benefits associated with it including higher levels of: motivation, autonomy, and positive attitudes about school (Kay, Summers, & Svinicki, 2011). Therefore it is important to delineate approaches that would foster classroom community in both online and in-residence courses.

College students perceive their sense of community from sources internal to the classroom as well as those occurring externally (Kay, Summers, & Svinicki, 2011). Therefore,

the actions of the professor while engaged in the classroom are not the only consideration, what interactions occur outside of the classroom are also considered. These interactions do not have to be face to face in order to impact classroom community, they can occur through a variety of means (Rovai, 2002). The feedback a professor gives following assignments is one such contributor to the feeling of classroom community.

In 2002, Rovai developed the CCS to measure sense of community in an online learning environment. With education transitioning to the use of asynchronous learning networks (ALN) there is a concern of how that separation will impact the students. Isolation and lack of personal attention can impact the students' sense of community and therefore reduce retention (Rovai, 2002). Rovai hoped that his instrument would better prepare educators to deliver instruction that promotes a sense of community. The CCS has since been used to measure sense of community in in-residence courses as well (Polnick, Ritter, & Fink, 2011; Ritter, Polnick, Fink, & Oescher, 2010).

Summary

As development lags behind learning, it is the responsibility of educators to enter the zone of proximal development and assist students with reaching their potential. Facilitators of their learning are responsible for helping them move to their next level of learning. The construction of knowledge takes place when a more knowledgeable other (Vygotsky, 1978) encounters a student and assists them at the minimal level necessary allow them to make meaning. Giving feedback to the students on their performance is one of the best methods to scaffold their learning. This will allow them to examine their existing knowledge and adjust it to accommodate the new information they are obtaining. Not only does this identify the gap in their knowledge but it also aids in determining how to close the gap in their knowledge. Quality

feedback is a critical element of learning (Barney, Khurum, Petersen, Unterkalmsteiner, & Jabangwe, 2012; Elnicki, Layne, Ogden, & Morris, 1998; Govaerts, van de Wiel, & van der Vleuten, 2013; Sobhani, & Tayebipour, 2015; Van der Vleuten, Schuwirth, Scheele, Driessen, & Hodges, 2010). Students need meaningful, timely, and specific assessment feedback (Brutus, 2010; Ende, 1998; Govaerts et al., 2013; Jordan 2004; Talib et al., 2015). These characteristics of quality feedback are what allow it to be productive towards future endeavors. This level of quality of feedback can easily be provided orally. Technology has advanced in ways to accomplish this task with more efficiency that its written counterpart.

Classroom community is beneficial for motivating students, retention, and completion (Rovai, 2002). Classroom community is impacted by a variety of factors including interaction with content, other students, and the instructor (Kay, Summers, & Svinicki, 2011). These interactions can occur both internally and externally to the classroom. Interaction with the instructor outside of class time primarily consists of feedback given from assessments. The more elaborate the feedback the more likely it is to be perceived as a social interaction.

There is a substantial amount of research in the area of quantitative feedback, yet the area of narrative, formative feedback has only recently attracted attention with oral feedback receiving the least consideration. This attention, however, limited it may be, is predominately in the medical field. Even so, there is no agreement as to exactly what type of feedback is most effective (Shute, 2008; Nelson & Schunn, 2009). Furthermore, new technology opens the door for new consideration to be given to this topic including determining the most effective method for use with digital natives. This leads to a need for additional research.

This gap in the literature leaves future studies the task of seeking to examine the impact of oral feedback in the field of higher education. Doing so will contribute to the theories regarding

oral feedback as well as guide the steps for the implementation of professional practice. The importance of this task can be no more succinctly put than by the words of Eraut (2006, p 118) who spoke to students entering higher education, "Hence we need to know much more about how their learning, indeed their very sense of professional identity, is shaped by the nature of the feedback they receive. We need more feedback on feedback."

CHAPTER THREE: METHODS

Design

A quasi-experimental, pretest posttest, non-equivalent groups, design was used to determine the effect of oral feedback on undergraduate students in online and in-residence courses. This design is best when non-equivalent, non-random groups are used in predetermined educational groupings (Gall, Gall, & Borg, 2007; Warner, 2008). Additionally, the purpose of this design is to manipulate the intervention by applying it to one group and withholding it from the other group (Creswell, 2009; Warner, 2008). With a pretest posttest assessment method, non-equivalent groups, and a manipulated intervention, a quasi-experimental design is the most appropriate choice (Campbell & Stanley, 1963). This design was also chosen by Wendt and Rockinson-Szapkiw (2015) when examining non-equivalent eighth-grade groups through a pretest posttest administration of the CCS to determine if face-to-face or online collaboration impacted perceived classroom community. Sobhani (2015) likewise used this design when studying non-equivalent English as a Foreign Language student groups through a picture story given as a pretest and a posttest to examine the effects of oral versus written corrective feedback.

The type of feedback given, oral or written, as well as the mode of instruction of the participants, online or in residence, served as the independent variables for this study. Oral feedback is a verbal response from an educator that provides information to students regarding their performance (Alquraan et al., 2010). The oral feedback provided in this study was in the form of a recorded audio file emailed to the students. Written feedback is comments given to students in text form (Silva, 2012). The written feedback provided in this study was in the form of comments typed into the track changes feature of their Microsoft Word document. Online learning was defined as instruction delivered electronically either synchronously or

asynchronously by Ashong and Commander (2012) and in-residence instruction is the classic version received face-to-face. The perceived classroom community as measured by the Classroom Community Scale CCS (Rovai, 2002) served as the dependent variable. The pre-test results from the CCS served as the covariate accounting for the varied existing perceived community among the participants. Classroom community is defined by Rovai (2002) as the connectedness students feel from their sense of duty and obligation to each other, and to their school, to aid in meeting their shared educational goals. Furthermore, classroom community has been described as the atmosphere of a classroom that promotes responsibility, risk-taking, help seeking, and concern for others (Fletcher & Baker, 2015).

Research Questions

The following research questions were proposed for this study:

RQ1: Is there a significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback while controlling for pretest scores?

RQ2: Is there a significant difference in perceived classroom community scores, as measured by the CCS, between online and in residence undergraduate students while controlling for pretest scores?

Null Hypotheses

The following null hypotheses were proposed for this study:

$H_0$1: There is no significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback while controlling for pretest scores.

$H_0$2: There is no significant difference in perceived classroom community scores, as

measured by the CCS, between online and in residence undergraduate students while controlling for pretest scores.

Participants and Setting

The population of this study was undergraduate students at a public university in Florida during the spring semester of the 2016-2017 school year. The participants for the study were drawn from a convenience sample of students in five sections of two writing courses all taught by one professor. These students were enrolled in either a college writing course in-residence or a writing topics in psychology course online. The in residence students were recruited for participation in their classroom during the first class meeting by the cooperating professor who described the study from the prepared instructions (see Appendix G). The online students were recruited for participation in their virtual classroom by the cooperating professor who posted a description of the study from prepared instructions (see Appendix G) on the first day of class. The students were advised of the Amazon gift card raffle in which all participants were entered. From those who completed both the pre-test and post-test, two participants were selected in a random drawing by the cooperating professor to win a twenty-five dollar Amazon gift card. While a selection threat to internal validity exists with a convenience sample, a somewhat demographically diverse sample was recruited, as a variety of students elect to attend this university and are required to take these courses.

The participating university opened in 1972 and currently has enrolled over thirteen thousand undergraduate students. Fifty-six percent of the student population is female and 44% is male. The student-to-professor ratio is 20:1 (State University System of Florida, 2016). For this study, the number of participants sampled was 68, which exceeds the required minimum for

a medium effect size. According to Gall et al. (2007) and Warner (2008) the required minimum for a small effect size with statistical power of .8 at the .05 alpha level is 76 students. The sample came from five different sections of undergraduate writing courses. These courses had a combined total of 115 students enrolled. The sample consisted of 23 males and 45 females. On both the pre-test and the post-test, participants were requested to report their demographic information including gender and race so that pre-test and post-tests were accurately correlated.

The independent variable was the type of instructor feedback received, either oral or traditional written. Those who received oral feedback received no written comments with their assigned grade. Those who received written feedback received no oral comments with their assigned grade. Students maintained the option to opt-out of the study at any time they believed they were being hindered or harmed by their type of feedback. Half of each section acted as the experimental group and received oral feedback. The other half of each section acted as the control group and received traditional written feedback. Oral or traditional written feedback was be given on all written class assignments with a length requirement of two typed pages or greater. Both groups received their feedback through email. Those in the oral feedback sections received an email with a link to a Jing screencast file where oral comments were made as the students' assignment was viewed. Those in the written feedback sections received an email with a Microsoft Word document containing comments in the track changes feature. The professor randomly determined which students from each section are placed in the treatment group and which are placed in the control group. Each section had its own hat that contained the names of all students in that section. The first half of names drawn out were assigned oral feedback, the remaining names in the hat were assigned written feedback. The process continued with each of the five hats until all students were assigned.

The data collection phase of the study took place during the months from January to May 2017. The dates for the pre-test and post-test were coordinated with the cooperating professor at the university. The researcher requested that the pre-test be completed during the first three weeks of the courses and the post-test be completed during the last week of the courses. This methodology will gave at least thirteen weeks time between the pre-test and post-test for the intervention. Likewise, a time frame of one semester was used in Augustine, Slack, and Warholak's 2015 study, which also used a pre-test and post-test design. Additionally, Chudzicki, Chen, Alexandron, and Pritchard (2015) found little evidence to support any issues with pre-test exposure over a semester long time frame.

Instrumentation

The dependent variable of perceived classroom community was measured with the Classroom Community Scale (CCS) (Rovai, 2002) (Appendix A). Rovai (2002) defined classroom community as the connectedness students feel from their sense of duty and obligation to each other, and to their school, to aid in meeting their shared educational goals. The 20-item, Likert scale, Classroom Community Scale was developed by Rovai in 2002 to measure sense of community in a higher education online learning environment. It consists of both a learning and a connectedness subscale. The learning subscale reflects the feelings towards the interaction of the construction of understanding and the achievement of the learning goals, while the connectedness subscale reflects only feelings of connectedness to the community (Rovai, 2002). Data was collected from 375 students in 28 different college courses and the instrument was determined to be a valid and reliable measure of classroom community. Cronbach's coefficient alpha for the full Classroom Community Scale was .93. Cronbach's coefficient alpha for the social community subscale was .92. Cronbach's coefficient alpha for the learning community

subscale was .87. A difference was found among gender (Rovai, 2002), which also validates the instrument, as the textual communication pattern of males is a separate voice whereas the textual communication pattern of females is a connected voice. The separate voice is independent whereas the connected voice is interdependent. The connected voice lends itself to a support of classroom community, more so than the separate voice, due to its emphasis on relationships (Rovai, 2002).

The CCS instrument was used in numerous studies (Barczyk & Duncan, 2013; Baturay & Bay, 2010; Freeman, Anderman, & Jensen, 2007; Graff, 2003; Ni & Aust, 2008; Rovai & Jordan, 2004; Rovai & Wighting 2005; Shea, Li, & Pickett, 2006). The instrument consists of 20 questions and used a five-point Likert scale that ranged from Strongly Agree to Strongly Disagree. Half of the items are reverse-worded, which adds validity to the instrument as it reduces the tendency for participants to regress into automatic agreement regardless of content (Warner, 2013). The Likert scale responses for items 1, 2, 3, 6, 7, 11, 13, 15, 16, and 19 utilize a scoring scale of strongly agree=4, agree=3, neutral=2, disagree=1, strongly disagree = 0; while items 4, 5, 8, 9, 10, 12, 14, 17, 18, and 20 utilize a scoring scale of strongly agree=0, agree=1, neutral=2, disagree=3, strongly disagree=4 (Rovai, 2002). Numbers are not included on the scale; only the worded choices ranging from strongly agree to strongly disagree. The scoring of these statements will be accounted for in the statistical analysis (Green & Salkind, 2011). The combined possible score on the CCS ranges from 0 to 80 points. A score of 0 points is the lowest possible score meaning that perceived classroom community is quite low. A score of 80 points is the highest meaning that perceived classroom community is quite high. Each of the subscales has 10 questions associated with them and has scores ranging from 0 to 40. The CCS was administered online utilizing Survey Legend, which allowed only one survey completion per

participant. Although there is no time limit, the CCS should take approximately 20 to 40 minutes to complete. Approval from the instrument author to utilize the CCS (Appendix C) was obtained prior to requesting approval from the Liberty University Institutional Review Board (IRB).

Procedures

Upon obtaining permission from the Liberty University IRB (Appendix D) in January 2017 to conduct the study during the spring of 2017, the researcher contacted by email the professor who had expressed interest in conducting this study and apprised the professor of the purpose of the study, the proposed timeline, and provided training on conducting the study (Appendix F).

Student members of the five sections of the writing courses involved were asked to consent to participate early in the semester and were placed into a drawing for one of two twenty-five dollar Amazon gift cards for their completion of both the pretest and the posttest. The form to consent to participate (Appendix E) was distributed by Survey Legend and was returned to the researcher electronically. A low consent to participate and/or experimental mortality could have threatened the statistical power of this study if students drop out of the courses at an uneven rate or in significant enough numbers. All data was removed from the study of any participant who did not complete both the pre-test and the post-test. An attempt to recruit 10% more participants than are necessary for statistical power was made but not achieved. Optimally for a small effect size, at least 84 participants would have been recruited from the potential 115 students enrolled, however only 70 were recruited and two were eliminated due to not completing the post-test. This left 68 total participants who consented and completed both the pre-test and the post-test.

In order to eliminate researcher bias, prior to the start of the study the professor randomly determined which participants in each section received the intervention (oral feedback) and which students in each section remained as the control (written feedback). Then the course rosters were given a unique identifier by the professor giving each student a unique three-digit numerical identifier and an alphabetic course identifier in order to blind the researcher to the identity of the students, as well as to whether or not the individuals are in the treatment or the control group.

Early in the semester both treatment and control groups took the CCS pretest online through Survey Legend and submitted it with their coded identifier to the researcher. Directions for completing the instrument were included by the researcher to reduce the likelihood of implementation error (Appendix G).

Every section then participated in their writing assignments throughout the sixteen weeks of the course. The researcher and the professor maintained communication throughout the semester to ensure correct implementation of the study. The treatment group received recorded oral feedback from the professor after each written assignment. The feedback utilized Jing screen-capture software. The professor had a working knowledge of this software prior to the start of this study and participated in the review training (Appendix G) to ensure understanding. The control group received written feedback from the professor after each written assignment. The written feedback utilized Microsoft Word's track changes and commenting features. The professor supplied a similar level of quality of comments either orally or written, depending on the group involved, after each written assignment. Differential selection could have threatened the validity of the study due to the additional variables different members of the courses will bring to the study. Likewise, bias within the professor may have existed. The professor was

trained on how to conduct the study (Appendix G). The professor agreed to predetermined number of feedback statements to make, either oral or written, for each written assignment.

During the last week of class both groups took the Classroom Community Scale (Rovai, 2002) posttest online using Survey Legend and submitted it with their coded information to the researcher. Directions for completing the instrument were included by the researcher to reduce the likelihood of implementation error (Appendix G). A testing threat existed due to identical pre-test post-tests. A thirteen-week timeframe between assessments reduced the possibility of this threat.

Data was collected from the scoring of the CCS pre-tests and post-tests (Appendix B). After data is statistically analyzed the professor informed the researcher of which unique identifier participants were intervention groups and which were control groups. Data results were reported and discussed in this completed dissertation. Results from the study were available to be distributed to participants upon request.

Data Analysis

This study intended to use an Analysis of Covariance (ANCOVA) to analyze the data collected to evaluate the two hypotheses. ANCOVA is the best choice of design when participants are not random, groups are not equivalent, and an intervention will be manipulated (Campbell & Stanley, 1963; Creswell, 2009; Gall et al., 2007). A Two-Way ANCOVA appropriately evaluates two categorical independent variables (Rovai et al., 2013; Warner, 2013) while neutralizing the effect of pre-existing differences of a dependent variable. This analysis was desired to account for the potential pre-existing differences in perceived classroom community between groups prior to the main intervention. The ANCOVA is capable of adjusting for these differences (Rovai et al., 2013). A quasi-experimental, non-equivalent

control groups, pretest-posttest factorial design implementing a Two-Way ANCOVA data analysis was proposed for this research to test all null hypotheses. However, during assumption testing the data failed the homogeneity of regression slopes test, as discussed below, which would make the results of an ANCOVA invalid. Therefore the researcher considered using an independent samples t-test but due to the small sample size, particularly of the online group, determined to instead perform a Mann-Whitney U test. A Mann-Whitney U test is commonly used when data is not normally distributed or when sample sizes are small and is recommended by Green and Salkind (2011) as an alternative to an independent samples t-test.

Descriptive statistics of the sample were calculated with SPSS using data collected from the scoring of the CCS (Appendix B). Descriptive statistics including the mean scores and standard deviations on each subscale of the instrument were calculated. Preliminary data was screened using a variety of methods consistent with current research texts (Warner, 2013; Rovai et al., 2013) in order to evaluate the required assumptions for the proposed Two-Way ANCOVA. A Box and Whisker plot was used to detect extreme outliers. The Shapiro-Wilk test and Q-Q plots were used to assess the normality of the population distributions. A series of scatter plots using the pre-test and the post-test scores were used to measure the assumption of linearity and the assumption of bivariate normal distribution. Levene's Test of Equality of Error Variance was used to measure the variance of the population distributions. Homogeneity of slopes was tested using tests of between subject effects, and this assumption failed, which resulted in the need for the Mann-Whitney U test. No additional assumption testing was needed for the Mann-Whitney U-test as the assumptions required for the test are: independent observations, normally-distributed data, and homogeneity of variances. There were independent observations as each participant has his own score and no participant was in more than one group. The normal

distribution and homogeneity of variances were previously tested for the proposed ANCOVA. For the Mann-Whitney U test, the significance level of $p < .05$, the typical level of significance used in educational research (Gall et al., 2007; Warner, 2013) was used as an indicator of rejecting or accepting the null hypotheses.

CHAPTER FOUR: FINDINGS

Overview

This research was conducted to determine whether providing recorded oral feedback increases classroom community in undergraduate students more so than providing traditional written feedback. Reported in this chapter are the results of the statistical analysis performed on the collected data from the pre-test and post-test scores using IBM® SPSS version 24. Two research questions were posed and their corresponding hypotheses were tested. The results of their statistical analyses are provided in this chapter. The original research questions and null hypotheses to be answered using an ANCOVA test are listed below.

Research Questions

RQ1: Is there a significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback while controlling for pretest scores?

RQ2: Is there a significant difference in perceived classroom community scores, as measured by the CCS, between online and in residence undergraduate students while controlling for pretest scores?

Null Hypotheses

$H_0$1: There is no significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback while controlling for pretest scores.

H_02: There is no significant difference in perceived classroom community scores, as measured by the CCS, between online and in residence undergraduate students while controlling for pretest scores.

Descriptive Statistics

Data from this study was derived from the use of the reliable and valid Classroom Community Scale (CCS) (Rovai, 2002) (Appendix A), which has two subscales, learning and connectedness. Undergraduate students at the participating university were given the CCS at the beginning and end of the Spring 2017 semester. The treatment group received oral feedback on their written assignments throughout the semester while the control group received written feedback on their written assignments throughout the semester. Two writing courses with a total of five sections were used as the population for this study.

Of the 115 potential participants for this study, 45 did not consent to participate and two did not complete the post-survey reducing the total number of participants to 68. The final sample was composed of 34 students receiving oral feedback and 34 students receiving written feedback. Of these 68 students, there were 22 online students and 46 in-residence students. See Table 1 for composition of groups. Of the 68 students, 45 were female and 23 were male. Fifty-two out of 68 of the participants were white, 8 were Hispanic, 5 were African American, 1 was Asian, 1 listed other, and 1 did not respond.

Table 1

Composition by Group

	Online	In-residence	Total
Control (Written)	11	23	34
Treatment (Oral)	11	23	34
Total	22	46	68

Scores for the CCS had the potential to range from a low score of 0 to a high score of 80. The higher the score, the higher the perceived classroom community. The mean CCS scores from the pre-test and post-test are provided in Table 2, along with the standard deviations and mean differences between pre-test scores and post-test scores.

Table 2

Descriptive Statistics for CCS scores

Group	**N**	**Pre-test Mean**	**S.D.**	**Post-test Mean**	**S.D.**	**Mean Difference**
Online	22	48.00	7.43	48.82	7.97	+0.82
In-res	46	46.76	6.04	49.33	6.02	+2.57
Written	34	48.41	7.02	48.21	6.50	-0.20
Oral	34	45.91	5.75	50.12	6.76	+4.21
Written online	11	49.55	7.22	48.27	6.53	-1.28
Oral online	11	46.45	7.66	49.36	9.50	+2.91
Written in-res	23	47.87	7.02	48.17	6.64	+0.30
Oral in-res	23	45.65	4.77	50.48	5.21	+4.83

Results

Data Screening

Following the procedures outlined by Warner (2013), data screening was conducted on the dependent variables and the covariate for inconsistences, outliers, and normality. Raw data was obtained from the Survey Legend exporting data feature for the pre-test and post-test and compiled into one Excel document. Answers from the pre-test and post-test consisted of SA, A, N, D, and SD (Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree respectively). These answers were converted to their numerical values (zero through four) as determined by Rovai (2002).

In order to include data with only minor omissions, missing values were identified during data screening and procedures for entering neutral scores were followed (Warner, 2013). There were three pre-tests and two post-tests missing only one entry. Those missing entries were replaced with a neutral score of two. No surveys contained more than one omission, nor did they contain a score greater than or less than the possible scores of zero to four. Two participants did not complete the post-test and their results were excluded from analysis, leaving 68 participant scores on which to conduct the analyses.

Assumption Testing

Prior to attempting the ANCOVA several assumptions were tested according to the recommendations of current research texts (Green and Salkind, 2011 and Warner, 2008). Having no outliers, normality of distribution, linearity between the covariate and dependent variable, homogeneity of variance, and homogeneity of regression slopes are the assumptions that were tested. While examining the boxplots, one outlier was discovered, a score of 27 for an online

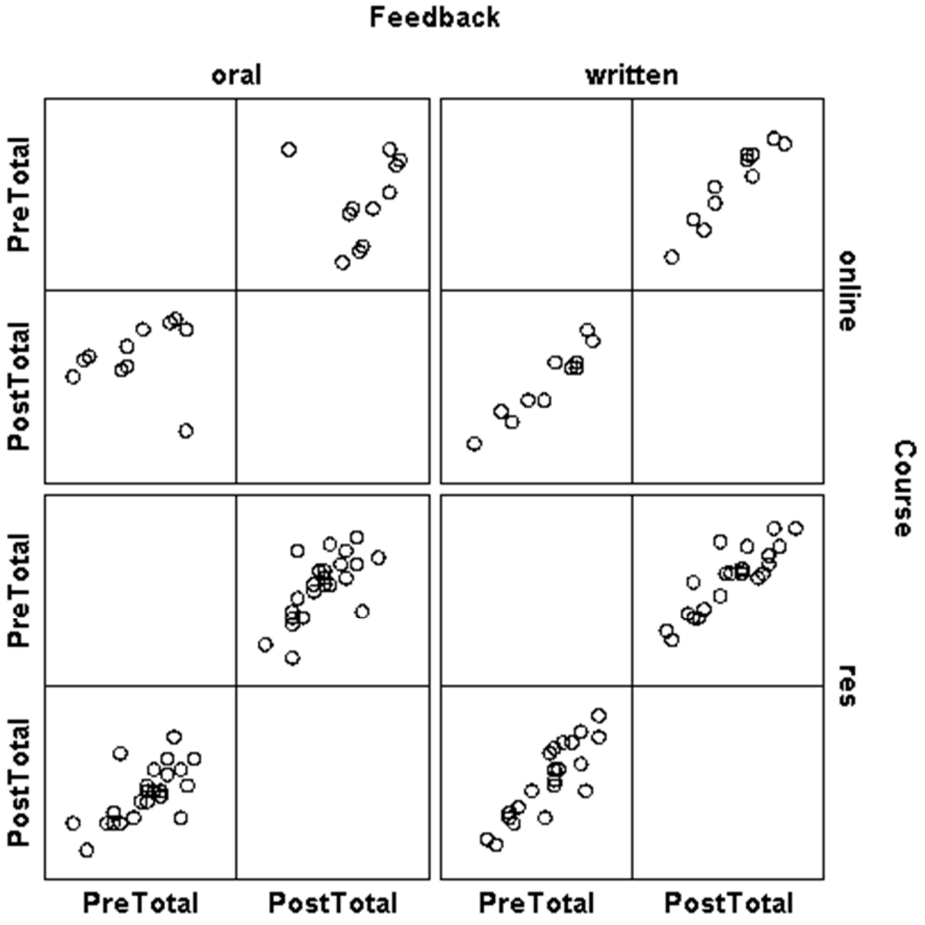
oral feedback participant. Aside from this outlier, the plots show normality of the post-test data for each independent variable.

Normality of distribution was tested using the Shapiro Wilk test and examining a series of Q-Q plots. The results of the Shapiro Wilk test revealed a *p* value of .021 for oral, .408 for written, .197 for online, and .713 for in-residence. As the *p* value for the oral feedback was below .05 this category was not likely normally distributed. However, this category contained the sole outlier in the data. Once the outlier was removed from the data and the Shapiro Wilk test was re-examined the *p* value for the oral feedback group became .275 and all independent variables were found to be normally distributed. This was also confirmed in the Q-Q plots. This outlier was only removed from the normality of distribution testing and remained a part of the data for subsequent testing.

Linearity between the covariate and dependent variable was tested using scatterplots. The scatterplots using the data for each category of feedback (oral or written) and each category of mode of instruction (online or in-residence) indicated linearity between the pre-survey scores and post-survey scores. All the plots show the data points having a positive linear relationship between the covariate and the dependent variable. These are shown in figure 1.

Figure 1

Linearity Scatterplots



Homogeneity of variance was tested using Levene's test and no violation was found for mode of instruction (F (1, 66) = 1.7, p = .197) or type of feedback (F (1, 66) = .155, p = .695). With a visual inspection of the scatterplots and the above *p* values greater than .05 homoscedasticity was confirmed.

Homogeneity of regression slopes was tested using tests of between subject effects. The *p* value of both independent variables was .000. This is indicative that the slopes are significantly different from each other. Therefore the assumption of homogeneity of slopes failed. With this failure an ANCOVA would yield invalid results. Considering the failed

assumption and the somewhat small online group size (n=22), the researcher decided to use a Mann-Whitney U test. A Mann-Whitney U test is commonly used when data is not normally distributed or when sample sizes are small and is recommended by Green and Salkind (2011) as an alternative to an independent samples t-test.

In order to conduct a Mann-Whitney U test the following assumptions needed to be met: independent observations, normally distributed data, and homogeneity of variances. There were independent observations as each participant has his own score and no participant was in more than one group. The data was previously determined to be normally distributed, exclusive of a single outlier, during assumption testing for the ANCOVA as outlined above. Levene's test was used to examine homogeneity of variances and no violations were found for oral/written feedback groups ($F(1, 66) = .155$, $p = .695$) nor for online/in-residence groups ($F(1, 66) = 1.700$, $p = .197$). Because the ANCOVA could not be conducted, the hypotheses changed to reflect the fact that pre-test scores would no longer serve as a covariate in the analysis. The new hypotheses were identical to the original hypotheses save for this elimination of the verbiage regarding the covariate.

Null Hypothesis 1

The first null hypothesis states, "There is no significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback." This hypothesis addresses the independent variable (type of feedback received) on the dependent variable (classroom community).

A Mann-Whitney U test was conducted to test for a significant difference in the post-test scores between the written feedback group and oral feedback group. The educational research

standard significance level of $p < .05$ (Gall et al., 2007; Warner, 2013) was used to indicate accepting the null hypotheses. The test resulted in a p value of .208 and thus was not significant. Therefore the researcher failed to reject the first hypothesis; there is no significant difference in CSS scores between the written feedback group and the oral feedback group. Therefore, under these conditions the perceived classroom community of students who receive written feedback did not differ significantly from the perceived classroom community of students who received oral feedback.

Null Hypothesis 2

The second null hypothesis states, "There is no significant difference in perceived classroom community scores, as measured by the CCS, between online and in residence undergraduate students." This hypothesis addresses the second independent variable (mode of course delivery) on the dependent variable (classroom community).

A Mann-Whitney U test was conducted to test for a significant difference in the post-test scores between the online students and the in-residence students. The educational research standard significance level of $p < .05$ (Gall et al., 2007; Warner, 2013) was used to indicate accepting the null hypotheses. The test resulted in a p value of .984 and thus was not significant. Therefore the researcher failed to reject the second hypothesis; under these conditions there was no significant difference in CSS scores between the online students and the in-residence students. The perceived classroom community of online students did not differ significantly from the perceived classroom community of in-residence students in this particular setting.

Summary

A description of the data collected for this study as well as a detailed explanation of the

procedures for its statistical analysis was provided in this chapter. The data contained the results of the CCS given to participants as a pre-test and a post-test. The statistical analysis examined the difference in scores on the post-test when comparing the oral feedback group to the written feedback group as well as when comparing the online students to the in-residence students. Descriptive statistics were reported and the Mann Whitney U test tested for differences between the two categories of feedback and between the two categories of classroom mode.

The main findings of the study were that participants in the oral feedback treatment group did not have a statistically significant difference in classroom community under these conditions when compared to the written feedback control group. Additionally, mode of classroom instruction (online or in-residence) did not appear to statistically significantly influence the classroom community scores. The perceived classroom community of students in these circumstances are statistically the same, regardless of type of feedback, or mode of class.

CHAPTER FIVE: CONCLUSIONS

Overview

This chapter will discuss the results of this study of the effect of oral feedback on undergraduate students perception of classroom community. The conclusions will be reviewed as they pertain to each research question. Additionally, implications for educational use will be presented. Furthermore, it will cover the limitations of this study as well as make recommendations for future research.

Discussion

The purpose of this quasi-experimental, pretest posttest, non-equivalent groups design was to examine the effect of oral feedback on perceived classroom community in undergraduate students at a public university. Five sections of two writing courses taught by one professor at a public university in Florida were given the Classroom Community Scale (CCS) as a pre-test at the beginning of their Spring 2017 semester in January. Participants in both online and in-residence course sections were assigned to either the treatment (oral feedback) group or the control (written feedback) group. They received their designated type of feedback on each writing assignment over the semester. At the end of the semester, in May, they were given the CCS as a post-test. There were two research questions and their results will be discussed as compared the existing literature below.

Null Hypothesis 1

The first null hypothesis for this study was: "There is no significant difference in perceived classroom community scores, as measured by the CCS, for undergraduate students who receive oral feedback and undergraduate students who receive traditional written feedback."

The primary conclusion of this study was that using oral recordings for feedback on written assignments did not increase the perception of classroom community. Many researchers have opined that feedback in higher education needs improvement its quality (Barney et al., 2012; Khowaja, Gul, Lakhani, Rizvi, & Saleem, 2014; Lunt & Curran, 2010; MacDonald, 1991). The lack of statistical significance in this conclusion can neither confirm nor deny that oral feedback would resolve the findings in this previous research (Khowaja, Gul, Lakhani, Rizvi, & Saleem, 2014; Lunt & Curran, 2010; MacDonald, 1991), which demonstrate the weaknesses in traditional written feedback to reach this higher level of quality.

This conclusion could also be seen as contradictory to previous research demonstrating that oral feedback is preferred as it often yields more clarification and tends to be more elaborate (Black & McCormick, 2010; Brutus, 2010; Govaerts et al., 2013; Jordan, 2004), as well as eliciting student inquiry and motivating the learning process (Black & McCormick, 2010; Jordan, 2004). It is plausible that this is the result of pretest sensitization (Campbell & Stanley, 1963), which polluted the results by altering responses to the treatment (oral feedback) due to knowledge of it through the pretest. In this study, the participants' awareness of classroom community as a dependent variable through the pretest may have weakened the effect of the oral feedback treatment.

In regards to the manner in which this study finds itself relating to Piaget's (1972) constructivist theory it can neither support nor refute this theory. Piaget describes learning as an ongoing process where knowledge is constructed continuously. Feedback can contribute to this learning process by giving the student new knowledge to increase their learning and improve their future performance (Barney, 2012; Beaumont, 2011). Under these circumstances, this study can not report on whether orally recorded feedback is any better or worse at performing

this duty in the constructivist learning theory than traditional written or any other form of feedback that may be selected by a professor.

Null Hypothesis 2

The second research question for this study was: "There is no significant difference in perceived classroom community scores, as measured by the CCS, between online and in residence undergraduate students." A secondary conclusion of this study was that mode of course instruction did not have a significant effect on the perception of classroom community. Under these conditions it could not be concluded that mode of instruction impacts classroom community. This could be seen as contradictory to findings in previous research (Artino, 2008; Ashong & Commander, 2012; Baker, 2010; Jones, 2011; Muilenburg & Berge, 2005; Mullen & Tallent-Runnels, 2006; Pigliapoco & Bogliolo, 2008; Rovai, 2002; Sapp & Simon, 2005; Tanner, Noser, & Totaro, 2009; Vavala & Namuth-Covert, 2009; and Yang, Cho, Mathews, & Worth, 2011) that do link online instruction and lack of teacher presence to a negative impact on the perception of classroom community.

In regards to the manner in which this study finds itself relating to Vygotsky's (1978) social development theory it can neither support nor refute this theory. Vygotsky (1978) expanded constructivist theory to include the role that other people play in learning. Classroom community has been demonstrated to develop more engaged and motivated students (Fletcher & Baker, 2015; Jones, 2011; Wendt, 2015). By supplying this social component students are able to further their learning. Under these conditions this study can not report on whether mode of instruction (online or in-residence) is any better or worse at performing this duty in the social development theory.

A myriad of research has demonstrated that quality feedback is a critical element of learning (Barney et al., 2012; Govaerts, van de Wiel, & Van der Vleuten, 2013; Sobhani, & Tayebipour, 2015; Van der Vleuten, Schuwirth, Scheele, Driessen, & Hodges, 2010). It is plausible that quality feedback can be obtained using either oral or written means and either method being applied in any mode of instruction (online or in-residence) could yield the outcome of improved classroom community. However, other research shows that higher education suffers from a lack of interaction and could benefit from improved relationships that could increase the perceived value of the courses (Angelopulo, 2013; Jones, 2011; Kilburn et al., 2014; Maher & Macallister, 2013).

Implications

This study contributed to the body of research surrounding the concepts of oral feedback and the perception of classroom community in undergraduate college students. Although the results were not significant with these particular participants, this study provides a jumping off point for future consideration of research to be conducted that will fill the gap in literature of these two areas. With the extant research having demonstrated a need to consider oral feedback (Barney et al., 2012; Brutus, 2010; Lunt & Curran, 2010; Schmidt et al., 2014; Sobhani, 2015) and revealing a decrease in the perception of classroom community with online students (Angelopulo, 2013; Jones, 2011; Kilburn et al., 2014; Maher & Macallister, 2013; Rovai, 2002) this study has supplied the connecting idea that alternative forms of feedback may impact the perception of classroom community. As the importance of classroom community has been determined (Fletcher & Baker, 2015; Jones, 2011; Wendt, 2015) it is crucial that researchers

consider any potential avenue to improve it.

It is worthy of mention that the oral feedback group did have the highest change in mean score between the pre and post-test with a positive increase of 4.21 points on the CCS. On the converse the written group had a reduction of .20 of the mean score between pre and post-test. Although these numbers lack statistical significance they do point to a potential difference that could be deemed as valuable with further research. While this study's evidence may be more anecdotal than empirical it nevertheless adds value to educational research on type of feedback and mode of classroom instruction.

Limitations

This study had several limiting factors. A threat to the internal validity of this study was selection for the study. While students were randomly assigned to either the treatment or control group, they self-selected to consent to participate in the study initially and to continue through to completion. The type of participant who elects to contribute to a study may have a naturally higher sense of classroom community, which drives them to consent to participate. If true, this would inflate their pre-test scores and thus alter the impact of the treatment.

Additionally, a threat exists due to preexisting non-equivalent groups. While the treatment (oral feedback) and control (written feedback) groups were equalized with each having N=34, the preexisting courses provided a greater opportunity for in-residence students to participate than online students as there were three in-residence courses and two online courses. This resulted in N= 46 in-residence participants and N=22 online participants. These non-equivalent groups can threaten the internal validity related to the second research question regarding the comparison of in-residence and online courses participants.

Furthermore, pre-test sensitization may threaten the internal validity of this study. Exposing the students to the pre-test may alter the participants opinions of the treatment and thus the results of the post-test may be due to sensitivity from the pre-test rather than the treatment itself. The final internal threat to validity is compensatory rivalry, otherwise known as the John Henry effect (Saretsky, 1972). Each section of the participating courses had an equal number of students receiving the treatment as the control. This provides the element of randomness but can also contribute to compensatory rivalry if the participants in the control group seek to overcome their experience of seemingly less desirable feedback and are motivated to improve their sense of classroom community by other means. Alternatively, resentful demoralization could occur if the control group experiences negative feelings associated with not receiving the treatment and thus an artificial reduction of classroom community would occur on the post-test.

When considering the threats to external validity the population must be considered. The sample from this study was taken from one professor's course load at one university in Florida. The nature of a singular cooperating professor limits the capacity to generalize to the entire population of undergraduate students with various professors. Furthermore, the act of singling out a particular field of study limits the capacity to generalize to the population being considered. Additionally, in this study 66% of participants were female and 76% of participants were Caucasian. Whereas, the most recent census reports show American undergraduate students consisting of only 43% females and only 42% Caucasian students (U.S. Department of Commerce, 2016). Therefore this study's sample had a higher than average consistency of females and Caucasians. With the proportions being off the results of this study are less able to be generalized to the population of U.S. undergraduate students.

Similarly to the internal threat to validity, an external threat to validity exists due to the

interaction of the pre-test with the treatment. The results of this study may not generalize to the non-pre-tested population. Likewise the same selection threat due to self-selection in electing to consent to participate could impact this study's ability to generalize to the population, as the type of student who consents to participate may not be representative of the typical student in the population.

Recommendations for Future Research

Further research in areas related to this study would be advantageous. Carrying out this research again with a larger sample size could yield results more generalizable to the population. Furthermore, a larger sample size would yield a potentially smaller effect size, should there be any in the statistical analysis. This could potentially reduce the risk of repeating a failed homogeneity of regression slopes assumption. Incorporating a variety of professors, courses, and universities would also add validity to the results. Using additional professors would solidify that the results were not related to other variables related to the specific professor. Having a myriad of courses and universities involved in the study would ensure that a diverse sample that is more generalizable to the population participates. Likewise, it would be advantageous to consider a variety of levels as this study primarily consisted of freshman level college students.

Consideration could also be given to reproducing this study with alternate forms of the Classroom Community Scale (CCS). The CCS was given in identical forms for the pre-test and the post-test in order to stay true to the instrument as it was intended. While there was a significant time period between pre and post-test it is still possible that the repeated use of the instrument impacted the results.

Additional research could be conducted to examine the effects of oral feedback when combined with written feedback to determine if offering both together would be an improvement. This might offer students even further insight, as both methods would be available for clarification of the assessment. Jordan (2004) conducted a study with one group receiving only written feedback and the other group receiving both oral and written feedback. With n = 18 for each group her sample size was not large enough to demonstrate statistical significance but gave an excellent jumping off point for future researchers. A unique addition to her study was that students were given a password in their oral feedback recordings and asked to provide that password on their next examination, a method for ensuring that the students had actually listened to the recordings. This may be an advantageous method to consider for any future research as it could reduce a threat to the study's validity by proving that the student had in fact heard the recorded oral feedback.

Also, research conducted using alternate methods of oral feedback aside from the orally recorded feedback submitted using Jing screen casting could be beneficial. It is possible that the form of the oral feedback impacted the results of the study. Perhaps a lack of familiarity with the software and even the concept of recording oral feedback on its own was undesirable in some way. For in-residence students it would be possible to conduct oral face-to-face feedback sessions. For online students other forms of recordings could be attempted and/or video chatting feedback sessions.

Finally, a qualitative study could be beneficial in uncovering other types of data that would inform on this topic more thoroughly. Adding the ability for the participants to reflect on the strengths and weaknesses of the type of feedback and mode of instruction could provide insight that may otherwise be undiscoverable.

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APPENDICES

Appendix A Classroom Community Scale

DIRECTIONS: Below you will see a series of statements concerning a specific course or program you are presently taking or recently completed. Read each statement carefully and place an X in the parentheses to the right of the statement that comes closest to indicate how you feel about the course or program (SA = strongly agree, A = agree, N = neutral, D = disagree, SD = strongly disagree). You may use a pencil or pen. There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, place an X in the neutral (N) area. Do not spend too much time on any one statement, but give the response that seems to describe how you feel. *Please respond to all items.*

1. I feel that students in this course care about each other (SA) (A) (N) (D) (SD)
2. I feel that I am encouraged to ask questions (SA) (A) (N) (D) (SD)
3. I feel connected to others in this course (SA) (A) (N) (D) (SD)
4. I feel that it is hard to get help when I have a question (SA) (A) (N) (D) (SD)
5. I do not feel a spirit of community (SA) (A) (N) (D) (SD)
6. I feel that I receive timely feedback (SA) (A) (N) (D) (SD)
7. I feel that this course is like a family (SA) (A) (N) (D) (SD)
8. I feel uneasy exposing gaps in my understanding (SA) (A) (N) (D) (SD)
9. I feel isolated in this course (SA) (A) (N) (D) (SD)
10. I feel reluctant to speak openly (SA) (A) (N) (D) (SD)
11. I trust others in this course (SA) (A) (N) (D) (SD)
12. I feel that this course results in only modest learning (SA) (A) (N) (D) (SD)
13. I feel that I can rely on others in this course (SA) (A) (N) (D) (SD)
14. I feel that other students do not help me learn (SA) (A) (N) (D) (SD)
15. I feel that members of this course depend on me (SA) (A) (N) (D) (SD)
16. I feel that I am given ample opportunities to learn (SA) (A) (N) (D) (SD)
17. I feel uncertain about others in this course (SA) (A) (N) (D) (SD)
18. I feel that my educational needs are not being met (SA) (A) (N) (D) (SD)
19. I feel confident that others will support me (SA) (A) (N) (D) (SD)
20. I feel that this course does not promote a desire to learn (SA) (A) (N) (D) (SD)

Appendix B Classroom Community Scale Scoring Key

CCS raw scores vary from a maximum of 80 to a minimum of zero. Interpret higher CCS scores as a stronger sense of classroom community. Score the test instrument items as follows:

- *For items: 1, 2, 3, 6, 7, 11, 13, 15, 16, 19; weights: Strongly Agree = 4, Agree = 3, Neutral = 2, Disagree = 1, Strongly Disagree = 0*
- *For items: 4, 5, 8, 9, 10, 12, 14, 17, 18, 20; weights: Strongly Agree = 0, Agree = 1, Neutral = 2, Disagree = 3, Strongly Disagree = 4*
- *Add the weights of all 20 items to obtain the overall CCS score.*

CCS subscale raw scores vary from a maximum of 40 to a minimum of zero. Calculate CCS subscale scores as follows:

- *Connectedness (social community); add the weights of odd items: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19*
- *Learning (learning community); add the weights of even items: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20*

Appendix C Authors Approval

An email was sent on June 19, 2016 requesting permission from Alfred Rovai to reproduce and use the CCS for this study. Below is his reply:

Good morning,

Yes, you may re-produce and use the CCS for your research. Make sure you cite the source Internet & Higher Education journal article in any report you write.

Best wishes,

Alfred Rovai, Ph.D.
aprovai@mac.com
http://www.alfredrovai.com/

Appendix D University Permission

The following email was sent on November 6th to the Department Chair at the participating university to request permission to conduct the study there.

Professor Striar, Department Chair
University of North Florida

Dear Professor Striar:

As a doctoral student in the School of Education at Liberty University, I am conducting research for my dissertation. The title of my research project is *The Effect of Oral Feedback on Perceived Classroom Community in Undergraduate Students* and the purpose of my research is to add to the existing research on feedback in higher education and social community in undergraduate classrooms.

A sample of, ideally, 76 students will be used. The type of feedback given, oral or written, will serve as the independent variable. The perceived classroom community as measured by the Classroom Community Scale (CCS) (Rovai, 2002) will serve as the dependent variable.

I am writing to request your permission to conduct my research at the University of North Florida in Professor Flowers spring 2017 courses. Professor Flowers was introduced to me by a mutual friend and has agreed to serve as the participating professor. If approved, Professor Flowers will give orally recorded feedback to one half of the consenting participants, and traditional written feedback to the other half of the consenting participants throughout the written assignments of his spring 2017 courses.

Participating students will only be asked to complete the CCS at the beginning and the end of the semester. Taking part in this study is completely voluntary and participants will be presented with informed consent information prior to participating.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval.

Sincerely,

Jennifer Boyles, Ed.S

His reply is below:

DEPARTMENT OF ENGLISH
College of Arts and Sciences

UNF
UNIVERSITY of
NORTH FLORIDA.

11/14/2016

TO WHOM IT MAY CONCERN:

Ms. Jennifer Boyles has my permission to conduct research on our classes in the English Department at the University of North Florida.

Sincerely,

[redacted]

Brian Striar, Chair

Building 8 (English Hall), Room 2601, 1 UNF Drive, Jacksonville, Florida 32224-7699
TEL: (904) 620.2273 FAX: (904) 620.3940 http://www.unf.edu/coas/english/
Equal Opportunity/Equal Access/Affirmative Action Institution

Appendix E: IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

January 26, 2017

Jennifer Boyles
IRB Exemption 2762.012617: A Quasi-Experimental Study Examining the Effect of Oral Feedback on Undergraduate Students' Perceived Classroom Community

Dear Jennifer Boyles,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
> (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

[redacted]

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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Appendix F Consent Form

A Quasi-Experimental Study Examining the Effect of Oral Feedback on Undergraduate Students' Perceived Classroom Community

Jennifer Boyles
Liberty University
School of Education

You are invited to be in a research study of *oral feedback on perceived classroom community*. You were selected as a possible participant because *you are an undergraduate student at the participating university*. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

Jennifer Boyles, a doctoral candidate in the *School of Education* at Liberty University is conducting this study.

Background Information:

The purpose of this study is to examine the effect of oral feedback on perceived classroom community in undergraduate students at the University of North Florida. This will be a quantitative quasi-experimental study. Data collected will aid in answering the questions: Is there a significant difference in mean perceived classroom community in undergraduate students who receive oral feedback and in undergraduate students who receive traditional written feedback while controlling for pretest scores? Is there a significant difference in mean perceived classroom community in online and in-residence undergraduate students while controlling for pretest scores?

Procedures:

If you agree to be in this study, I would ask you to do the following things: complete an online 20 question survey at the beginning of your course, participate in your course as you normally would, receive feedback on your writing assignments through either the treatment (oral feedback) or the control (written feedback) group, and complete an online 20 question survey at the end of your course.

Risks and Benefits of being in the Study:

The study has several minimal risks that are no more than one would encounter in everyday life. These risks include a breach of confidentiality, which will be reduced through the use of coding. However, confidentiality among participants cannot be guaranteed. Preference of which participants receive oral feedback and which receive traditional feedback will not be considered but the quantity and degree of comments will be equalized between both methods.

The benefit to participation is helping to explain the effect of oral feedback on perceived social community.

Compensation:

You will not receive payment for participating in this study.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a participant. Research records will be stored securely and only the researcher will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting that relationship.

Contacts and Questions:

The researcher conducting this study is *Jennifer Boyles.* You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at jboyles1@liberty.edu or 334-202-4261. Her advisor is Dr. Amanda Dunnagan who can be reached at ajdunnagan@liberty.edu or 434-582-2000.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher *or her advisor*, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Carter 134, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information to keep for your records.

Statement of Consent:

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

Signature:_____Date: _____

Signature of Researcher: _____Date: _____

Appendix G Instructions for Professor

The professor will randomly draw from a hat which students from each section will receive oral feedback and which will receive written feedback. The professor will review how to use Jing screen capturing software. The professor will assign a letter identifier to each course without informing the researcher of this identifier until after the collection of the post test results. Likewise, the professor will assign each student a number identifier, which will not be revealed to the researcher. For example the first student on the roster in the first section might be given the identifier A01.

On the first day of class, the professor will distribute an email with a link to the consent form (Appendix E) and orally review their content with the in residence courses. The provided announcement will be posted in the online courses and read aloud to the in-residence courses. Instructors will also apprise students of the knowledge that every student who participates in both the pre and posttest will be entered into a drawing to win one of two twenty-five dollar Amazon gift cards. For the online courses, this information will be posted to the virtual classroom. Consent forms will be electronically submitted to the researcher. The professor will orally review the instructions for completion of the Classroom Community Scale (Appendix G) with the in residence courses, and post this information to the virtual classroom for the online courses. The professor will provide the students with the information for how to log in to SurveyLegend and take the CCS. The professor will request the students to accomplish this task early in the semester. Requested dates for completion of the CCS will be posted on the class syllabus and in the class announcements for both online and in residence courses.

The professor will then continue on instructing his courses as usual. When a written assignment is due for those in the oral feedback group, the professor will utilize Jing to record

oral feedback for the students' assignments. For those in the written feedback group, the professor will use Word track changes and comments features for the students' assignments. Both groups will receive between a similar number of comments whether oral or written. After each submission of a written assignment the process of oral or written feedback will continue in the same manner. At the end of the course the professor will remind students of the directions for completing the CCS as well as how to access it and their identifiers. The students will be requested to complete the CCS as the post-test. Once the data has been collected by the researcher on the post test results the professor may inform the researcher of the identifiers which were associated with the oral feedback and the written feedback groups. The researcher will draw for the Amazon gift cards from the identifiers who participated in both the pre and the post-test. These identifiers will be told to the professors who will obtain the gift card from the researcher and pass it along to the selected participants.

Appendix H Directions for CCS

DIRECTIONS: You will see a series of statements concerning the writing course you are presently taking or recently completed. Read each statement carefully and select the answer choice that comes closest to indicating how you feel about the course (SA = strongly agree, A = agree, N = neutral, D = disagree, SD = strongly disagree). There are no correct or incorrect responses. If you neither agree nor disagree with a statement or are uncertain, select the neutral (N) answer choice. Do not spend too much time on any one statement, but give the response that seems to describe how you feel. *Please respond to all items.*