ANALYZING THE FEEDBACK PREFERENCES AND LEARNING STYLES OF SECOND-LANGUAGE STUDENTS IN ESOL WRITING COURSES AT BOWLING GREEN STATE UNIVERSITY

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A Dissertation

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My dissertation study fills current gaps in scholarship by analyzing the feedback preferences of students enrolled in two sections of English for Speakers of Other Languages (ESOL) 1010: Academic Composition II courses at Bowling Green State University during the Fall 2015 semester and whether or not those preferences match the students’ individual learning styles as measured by a learning style inventory. Additionally, the study examines how providing feedback in different modalities (audio, video, and written) impacts student comfort levels and their perceptions of the writing classroom. Finally, the study examines the impact each feedback modality had on the students’ academic performance as measured by the grades students received on essay assignments when utilizing the differing feedback modalities throughout the semester. The learning style inventory and initial feedback preference survey were provided during week 1 of the semester, and a follow-up feedback preferences survey was given during week 15. A grounded theory approach was used to analyze, code, and categorize the students’ survey responses. Through classroom observation, student surveys, and grade analyses, it was clear that despite showing a preference for written feedback at the onset of the semester, the majority of students identified as visual learners, preferred video feedback, and performed better academically when they received video feedback.
For Tonia
ACKNOWLEDGMENTS

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CHAPTER I.

BEYOND BEST PRACTICES: (RE)PLACING VALUE ON CULTURAL AND LINGUISTIC DIFFERENCE THROUGH THE USE OF MULTIMODAL FEEDBACK AND LEARNING STYLE-BASED EDUCATIONAL PRACTICES

We often think of the first language (L1) writing classroom and the second language (L2) writing classroom as different entities. However, even "the first-year composition classroom is no longer the kind of monolingual space it once was" (Matsuda, Cox, & Jordan, 2006, p. 1). In fact, as of 2004, over half a million international students were studying at U.S. colleges and universities (Matsuda, Cox, & Jordan, 2006). As a result, Matsuda (2006) argues that "many college teachers are beginning to reconsider the implications of their instructional practices for students who come from various ethnic, cultural, and linguistic backgrounds" (p. 1). Nevertheless, Matsuda (2006) points to the fact that the majority of writing teachers remain unsure of how to meet L2 students' different cultural needs in the writing classroom (p. 2).

One way writing teachers may be able to better assist L2 writers is by determining their students' learning styles and providing feedback to students on written essay assignments in a modality that best matches their preferred way of learning due to the fact that the L2 student population includes a variety of diverse learners. In fact, educational research has found that an important facet of how students learn is their own learning style. Learning styles can be defined as "cognitive, affective, and physiological traits that are relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (Keefe, 1979, p. 4).

1 Feedback meaning the ways in which instructors provide students with both summative and formative formalized written, audio, and/or video commentary on early drafts of written compositions to assist students improve their writing.
The drive to understand a student's response to a learning environment has lead to much research into studying the learning styles of undergraduate native English speakers (NS) in face-to-face courses as well as online environments (Dunn & Dunn, 1978; Diaz & Cartnal, 1999; Harrelson, Leaver-Dunn, & Wright, 1998; Jones, Reichard, & Mokhtari, 2003; Liu & Reed, 1995; Mupinga, Nora, & Carole Yaw, 2006; Nelson, Dunn, & Griggs, 1993; Schroeder, 1993; Wehrwein, Lujan, & DiCarlo, 2007). Also, to a lesser degree, the learning styles of non-native English speakers (NNS) have been examined as well (Biddadi & Yamat, 2010; Kavaliauskiene, 2003; Riazi & Riasati, 2007; Witkin, 1976; Wong & Nunan, 2011).

Nevertheless, that limited research has led to findings of incredible import. Witkin (1976) has determined that NNS have fundamentally different ways of learning and thinking than native English speakers. If NNS bring unique learning styles with them when they study abroad, then one can safely posit that NNS may have difficulty adjusting to their new learning environments and thus have a decrease in obtained knowledge when compared to NS. Therefore, it would benefit NNS and their instructors to identify the learning style preferences of NNS undergraduate students meaning that Witkin's findings could still be relevant to both students and instructors. This increased understanding could lead to significant implications in regard to teacher training, curriculum design, the ways in which we provide feedback to NNS, and, ultimately, the success of NNS in undergraduate courses. For example, would teacher training sessions focused on how to determine students' learning styles allow teachers to better understand how their students learn and how they should present materials to those students? Or would individualized feedback in a modality that matches students' learning styles allow instructors to reach students more effectively and create a more positive learning environment? These are two examples of unanswered questions worth scholarly pursuit at this moment in time.
This chapter is divided into seven sections—each of which provide a review of the literature in regard to learning styles and feedback methods. In the first section, I outline background information on why a focus on assessment and teacher feedback is important for any teacher of writing to consider. In the next section, I provide a more focused discussion on assessment and teacher feedback in the L1 and L2 writing classroom and address the contributions of my dissertation. In section three, I discuss scholarship addressing audio and video feedback in the writing classroom. Section four discusses the intersections between learning style pedagogy and L2 writers. The fifth section outlines how this dissertation can further relevant conversations in the field. Section six provides a brief overview of my specific methods and methodologies, as well as my research site and research participants. The final section of this chapter outlines the subsequent chapters of this dissertation.

Literature Review

Why Focus on Writing Assessment and Feedback?

Teachers typically understand and acknowledge that assessment (any act of making a judgment about student work and/or providing feedback on such work) is a major part of their work. However, many may wonder what providing feedback actually accomplishes and why it is worthy of continued, focused research. One way of addressing this question is to look at answers from a variety of time periods.

For some, assessment is used primarily to diagnose students' strengths and weaknesses. Popham (2011), Emeritus Professor in the Graduate School of Education at the University of California, Los Angeles (UCLA) and winner of the Award for Career Contributions to Educational Measurement (2002) from the National Council on Measurement in Education as well as the receiver of the Certificate of Recognition (2006) from the National Association of
Test Directors, suggests that weaknesses discovered through assessment can form the basis of further instruction, and by identifying students' current achievement levels teachers can enhance students' learning and previously mastered skills can then be avoided as to not waste students' valuable time in class.

Another purpose of assessment is for teachers to monitor their students' progress. Through assessment, teachers can determine if their students have made adequate improvement. According to Popham (2011), teachers tend to believe that they teach well and that their students make progress as a result of their instruction. Because of these beliefs, without formal assessment, teachers might assume that students are progressing when there is no actual progress. Popham (2011) goes on to suggest that without assessment teachers would never know when or how to adjust their lessons and/or modify their instructional approach. Thus, assessment can be a valuable tool that shows teachers the effectiveness of their teaching. It can confirm that that a teacher's instruction is working or highlight the fact that adjustments must be made. Even though this is not the only way to determine whether teachers should change their instructional approaches, one can see how assessment practices can directly benefit both the student and teacher.

Yet another purpose of assessment, specifically, formative assessment, is to advance student learning in some way. Black and William (1998) found that formative feedback does increase students' learning. Specifically, they argued, “There is a body of firm evidence that formative assessment is an essential component of classroom work and that its development can raise standards of achievement” (p. 148).

According to Sadler (1989), effective, efficient feedback has several requirements. Sadler (1989) argues, “Feedback requires knowledge of the standard or goal, skill in making multi-criterion comparisons, and the development of ways and means for reducing the discrepancy between what is
produced and what is aimed for” (p. 471). Sadler (1989) also states that one of the most important
goals of feedback is to reduce the gap between where the student is and where they need to be.
Thus, we also can posit that effective feedback is how a cause of learning.

Hattie and Timperley (2007) agree with Black and William (1998), Popham (2011), and Sadler (1989) and state that well provided feedback can a have a major impact on learning and
success. According to Hattie and Timperley (2007), providing feedback within a learning context
and as part of a teaching context is essential for students. The authors point to the fact that
feedback can take the form of video or audio and still be quite effective as long as it relates to a
specific learning goal and helps students move toward achieving it.

Additionally, Hattie and Timerley (2007) laud feedback that leads to increased
motivation and effort as well as feedback that assists student learners in managing a more
complex task. This mirrors what Wiliam (2011) argues in regard to what comprises meaningful,
well-communicated feedback. He writes that teachers should perform more like coaches,
 focusing on motivating students to improve throughout a given course. William (2011) states that
great coaches not only recognize talent, they foster and develop it—they make the athletes
achieve more than they thought possible. William (2011) claims that coaches do this by
providing feedback that moves learning forward.

In conclusion, a focus on assessment and feedback is important for both students and
teachers for a number of meaningful reasons. Feedback has the power to reduce discrepancies
between the present state of mind a student has and the preferred state the teacher assists the
students work toward. It can also help motivate students to succeed and better themselves.
Without feedback, teachers may be simply informing students what their current state of
achievement is without providing meaningful feedback to help them move forward. The scholars
mentioned above agree that this does not assist student learners' progress in regard to course
competencies. One of the main goals in any secondary writing course is to assist writers with skill development. Thus, one can see how this brief discussion on the varying purposes of assessment practices highlights the importance of successful feedback to any writing classroom.

**Teacher Feedback in the L1 and L2 Writing Classroom**

L2 methods of providing feedback to student writers have been greatly influenced by L1 composition scholars dating back as far as the early 1970s when several argued in favor of the process approach to teaching writing (e.g., Elbow, 1973; Emig, 1971; & Murray, 1972). These scholars argued in favor of focusing on revision rather than the final product with an emphasis on providing feedback to students. According to Tobin (2001), process theory allowed instructors to stop ignoring "student interests, needs, and talents" (p. 5). As the focus of writing instruction changed from an emphasis on the product to an emphasis on process, the ability to provide students with helpful feedback became an increasingly important teacher skill for instructors of writing.

As Norbert Eliot points out in his comprehensive account of writing assessment, *On a Scale: A Social History of Writing Assessment in America*, the 1970s and 1980s were very much a time of internal conflict between those who held the more traditional view that students should be evaluated based on their results of more indirect testing because of the reliability of scoring processes, and those that favored essay exams or portfolio-based assessments. Some teachers and scholars who took a stance against essay-based and portfolio-based assessment practices also began to point to the fact that providing feedback to students on their drafts was not a worthwhile process for students. In 1977, Marzano and Arthur argued that "teacher comments . . . [have] small influences on student writing (cited in Knoblauch & Brannon, 1981, p.1). Additionally, Knoblauch and Brannon (1981) found that previous research has shown that "students often do
not comprehend teacher responses to their writing” (p. 1). Worse still, was that Sommers (1982) studied 35 university writers and concluded that the majority of teacher feedback given to students was arbitrary and that most comments given by teachers were problematically mean-spirited in nature (p. 149). That said, the most troublesome finding for Sommers (1982) was that the majority of teacher comments were not composed to help the writer find their own voice and identity but were geared toward changing a student's composition to look like an ideal product that the instructor already had in mind before assigning the work. Sommers provides an example of a student, "Antonio," who wrote about his experiences as an immigrant in the first draft of his essay. However, the teacher's feedback primarily focused on making the essay match the thesis statement rather than helping the student tell the story he wanted. Sommers' claims that this type of feedback stifles the voice and identity of the writer (p. 149). It is clear that at this point in history, some teachers did not value the importance of students' voices and identities as components that were anywhere near as valuable as whether or not the finished product followed certain predetermined essay conventions.

Additional concerns in regard to written teacher feedback were explored during the 1980s as well. One being that many students, despite their level of interest and motivation, regularly misunderstood teacher feedback which resulted in students experiencing lower student achievement levels than expected. Sperling and Freeman (1987) conducted a case study of a high-school student who was described to be an overall good student. However, the authors cite numerous occasions in which the student misunderstood her teacher's written feedback and failed to make correct revisions. While misunderstandings were clearly an issue, Hairston (1986) also pointed to the fact that written feedback was often too time-consuming for students which also

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2 Part of which is one's learning style in addition to more commonly discussed aspects of identity such as age, race, gender, economic status, and so forth.
contributed to low achievement and frustration for some students. Ultimately, the multitude of problematic findings mentioned above led scholars in the late 1980s to question the use of writing as the best modality to provide feedback to student writers. For example, Moxley (1989) argued that we should work to improve how we provide written feedback to students, and he also claimed that audiotaped feedback is highly preferable to written comments—an argument that will be further discussed later on in this literature review.

By the late 1990s, however, scholars largely disagreed with earlier notions put forth in the 1980s that teacher feedback did not impact students in meaningful ways. Straub (1997) argued that "students read and make use of teacher comments and that well-designed teacher comments can help students develop as writers (p. 92). However, little changed in regard to the difficulty of the practice as scholars still regularly pointed to the immense challenge of just how to provide meaningful feedback to student writers. Elbow (1999), for example, still referred to the task as "a dubious and difficult enterprise" (p. 200). Also, during the 1990s even more confusion was added to discussions of best practices in regard to feedback as White (1999), among others, refuted the arguments put forth by Sommers and suggested that we should provide even more detailed commentary on how students can write the ideal paper, citing the positives of implementing rubrics and scoring guides into the assessment process. It became clear that scholars were largely divided in regard to best practices for providing feedback to student writers. This debate has continued to present day as recent studies continue to point to the fact that students in the 21st-century writing classroom continue to have significant problems understanding margin comments from their teachers and are largely failing to apply written feedback to successfully implement revisions (Clements, 2006; Nurmukhamedov & Kim 2010).

In fact, Clements (2006) conducted a case study of her own students to find that students
reported altogether disregarding most of her comments and labeling a large percent of the rest as incomprehensible. After years of using primarily written comments to respond to student papers, it seems time to openly discuss the limits presented by this form of feedback and consider alternatives, which several scholars have started to do (e.g., DeVoss & McKee, 2007; Sorapure et al., 2006; Takayoshi & Huot, 2009). The research conducted by the scholars listed here makes it clear that the analysis of methodologies, technologies, and ethical considerations in regard to digital writing and digital writers have become a major consideration in our field. Undoubtedly, the increasing digital presence in educational contexts will result in this focus continuing.

This short history of L1 scholarship on feedback highlights only a snapshot of the large, sweeping conversations that took place over time in regard to teacher feedback. It is important to note that scholarship on feedback in regard to L2 students has followed a similar path as L1 scholarship. For example, a decade after Elbow pointed to the positives of using a process approach in the writing classroom, Zamel (1983) argued that ESL writing teachers should adopt a process-based pedagogy and require students to write multiple drafts while providing students with teacher feedback between drafts. However, shortly thereafter, Raimes (1985) declared that "writing in an L2 is startlingly different from writing in our L1 . . . [and] although there is certainly much to be learned from developments in L1 composition theory, research, and practice, it seems wise to interpret these lessons very carefully into L2 writing contexts" (p. 232). Silva (1993) would later also argue that despite the fact that many scholars argue L1 and L2 students are similar, the truth is that "there are a number of salient differences between L1 and L2 writing with regard to both composing processes . . . and features of written texts" (p. 657). Silva (1997) continued to argue his position a few years later by saying that for teachers to truly respect ESL writers, it is required that we understand them and place them in the most suitable
learning environment possible given their unique differences to L1 students (p. 359), which I understand to be a place where students' cultures and identities are valued during both the instruction and assessment processes.

This realization is what makes my proposed dissertation study so important for today's professors, adjuncts, WPAs, Writing Center administrators as well as L1 and L2 student populations at both the graduate and undergraduate levels. We can see from this brief literature review that even if L1 research finds there to be certain advantages or disadvantages for L1 students in regard to a specific style of feedback, we cannot simply assume the same is true for L2 learners as highlighted by the scholars mentioned above. By providing L2 writers with feedback that matches their learning style, we may be able to better place them in, as Silva suggests, a more suitable learning context while contributing to the ongoing conversation in regard to how to provide students with the most meaningful feedback on their compositions; that is, feedback that helps students improve academically while also considering and valuing students' unique identities they bring with them to the classroom. A worthwhile investigation to be sure.

*Audio and Video Feedback in the Writing Classroom*

Clements (2006) suggests that the disconnect between feedback and revision is complicated by a number of factors, including the legibility of handwriting and editing symbols for L1 writers. This is not an altogether new concept as Moxley (1989), mentioned above, questioned the usefulness of written feedback and lauded audiotaped feedback in favor of written commentary in the 1980s. However, he was not the first to do so. In actuality, audiotaped feedback "has been used since the early 1960s" (Huang, 2000, p. 201). Although there have been many studies conducted on how audio feedback has been used in writing classrooms (Anson,
1997; Hunt, 1989; Hyland, 1990; Klammer, 1973; Moxley, 1989), almost no research has examined the effectiveness of audio feedback in improving students' comfort levels and/or writing ability quantitatively prior to 2000 outside of a few key investigations. Hurst (1975) found that students received higher grades on report writing when given audio feedback due to the fact that higher quality revisions were made. Logan et al. (1976) found students performed better on dental exams when given audio feedback instead of written feedback. In one of the only detailed studies to truly measure how audio feedback impacted student achievement over multiple years, Pearce and Ackley (1995) conducted a four-year long study that examined 470 students enrolled in business writing classes and found that by providing students with audio feedback students reported having increased motivation, and there was a 7.9% increase in overall grades.

Scholars have also found there to be a number of other affordances to implementing audio feedback outside of student achievement. Carson and McTasney (1978) found that undergraduate students preferred audio feedback because it was easier to understand. Clark (1981) found that students preferred audio feedback due to the incorporation of inflection and major problems were easier to articulate with voice allowing Clark to make detailed revision suggestions in a fraction of the time it would have taken if written feedback were to be used instead. Similarly, Yarbro and Angevine (1982) found that 90% of their students found audio feedback from teachers to be more understandable than written feedback, and Sommers (1989) also found that audio feedback was more clear and detailed.

There has also been some indication that audio feedback makes L1 students more comfortable in the classroom. Students have reported that they feel closer to their teachers when they are given audio feedback instead of written feedback (Carson & McTasney, 1978;
Kirschner, van der Brink & Meester, 1991; Logan et al., 1976). Yarbro and Angevine (1982) also found that 73% of the students they surveyed reported being more motivated to revise when the teacher took the time to send them an audio recording.

Since 2000, there seems to be renewed interest in studies measuring the impact of audio feedback most likely as a result of audio recording technology becoming increasingly accessible as teachers can now easily record comments from their PC, laptop, tablet, cell phone, or any number of other mobile devices. Selfe (2009) illustrates the pedagogical use of audio feedback for student writing while emphasizing the “rhetorical nature’ of response to a piece of writing” (633). She goes on to state that “aurality became subsumed by print within composition classrooms,” despite the fact that the media have increased exposure to auditory messages (p. 637). Recent research also highlights the fact that this interest in audio feedback is increasingly spreading to a vast number of disciplines as well. For example, teachers of the social sciences have examined the use of audio feedback on writing assignments and found that providing feedback using audio files leads to improvements in both the quantity of comments and the quality of comments (King, McGugan, & Bunyan, 2008). Rodway-Dyer, Knight, and Dunne (2011) found that undergraduate geography students found audio feedback helpful and students reported that they would prefer audio feedback over written feedback in the future. Bourgault, Mundy, and Joshua (2013) found that nursing students reported that audio feedback on weekly writing assignments was more personal and significantly easier to understand than written feedback. Additionally, nursing teachers included in the study found providing audio feedback to be a less time-consuming practice than providing written feedback and also found that it was more effective in helping students achieve project goals. Similarly, Brearley and Cullen (2013) studied 25 undergraduate students enrolled in a "Tropical Land Use and Conversation" course
within the School of Science and the Environment at Manchester Metropolitan University and found that students reported finding audio feedback more clear, more engaging, and more helpful than written feedback. The lecturer of the course also cited that providing audio feedback was easier and more time efficient than providing written feedback.

There has also been research in regard to audio feedback in L2 contexts; however, much of the research remains narrowly focused on vocabulary and language acquisition. This is most likely due to the fact of how L2 learners have primarily been asked to use technology throughout history as a tool to build vocabulary and language skills. In one of the earliest arguments in favor of using audio in the language classroom, Garfunkel (1972) argued that audio in the form of the radio should be used with L2 students because it provided a direct link to vocabulary and language used by NS. Wipf (1984), over a decade later, also argued in favor of using audio from the radio with L2 learners due to the fact that students could hear and learn expressions and teachers could use it to teach specific grammar rules—the emphasis here being on listening comprehension. And Twarog and Pereszlenyi-Pinter (1988) began utilizing the telephone to provide their L2 students with audio feedback via the telephone, finding it to be a highly effective way of providing corrective feedback on grammar and language development.

Then, in the 1990s, "there was a growth of stand-alone programs that could be used in classrooms . . . for individual learning" (Sokolik, 2003, p. 410). This led to the creation of computer-assisted language learning (CALL) software. However, "due to the limitations of the technology at the time, in addition to network connections being limited and expensive, many of them focused on a limited band of skill development" (Sokolik, 2003, p. 411). This highlights the fact that L2 students have traditionally used technology as a means to assist them or test them on their grammatical accuracy, not their overall writing ability. Similarly, Levy and Stockwell
(2006) stated that research has shown that CALL has had a major influence on how we continue to think about utilizing technology for L2 students and reminds us that CALL has helped students greatly with second language acquisition, but the authors do not directly point out a single affordance to assisting L2 writers with the writing process.

Today, L2 scholars remain primarily interested in how technology can help students with language, but there are some analyzing how audio feedback can impact revision for L2 students. Morra and Asis (2009), for example, found that "[audio feedback] was chosen by almost 100% of the students" (p.77) over written feedback; however, the authors found that each student varied in regard to if the audio feedback reduced their number of local grammar errors. Although these are encouraging findings, the revisions discussed by the authors are ones focused primarily on error correction—not global writing issues related to organization, style, or tone, which continues to be a gap in current scholarship.

Although relatively little attention has been given to the voice assessment of student work outside of face-to-face interactions (clearly indicating that further research should be conducted in regard to digital forms of recorded audio feedback), at least when compared with issues related to written feedback, the attention it has received strongly points to a promising form of feedback. Unfortunately, there is currently a disconnect between how studies have measured the impact of audio feedback on student perceptions in regard to L1 students, and how studies have only been concerned with how audio feedback has impacted L2 students in contexts related to language acquisition and grammar skill development. So, while much has been said about audio feedback on writing assignments in L1 contexts, "in the L2 context, so far, there has been little research on [audio feedback] . . . there is a need to research this topic" (Huang, 2000, p. 205). It is also worthwhile to note that the majority of the studies conducted on this topic, especially
post-2000, have analyzed the effectiveness of audio feedback on writing assignments outside of the writing classroom on student writers enrolled in business, geography, or nursing courses. How this modality of feedback impacts writing students in writing courses must be further analyzed before any conclusions can be drawn about the effectiveness or ineffectiveness of such feedback. This study, then, works to bridge this current gap in scholarship while contributing to scholarly conversations in regard to audio feedback in both L1 and L2 contexts.

Significantly less research has been conducted in regard to the impact of providing students with digital video feedback, but there does seem to be a recent growing interest in its use as evident by numerous recent investigations (Brick & Holmes, 2008; Ice, Swan, Diaz, Kupeczynski, & Swan-Dagen, 2010; Moore & Filling, 2012; Stannard, 2007; Thompson & Lee, 2012; Warnock, 2008). However, despite the fact that these studies have all pointed to the fact that video feedback allows instructors to provide more individualized feedback, there has been little quantitative data gathered on the subject. What has been found is that video feedback carries all of the benefits of face-to-face student conferences with a perceived distance that results in students feeling more comfortable using video feedback than one-on-one meetings with less time commitment for the instructors (Carabajal, LaPointe, & Gunawardena, 2003). Studies have also reported that teachers prefer video feedback over conferences because video feedback allows teachers to have more control over what is communicated during the session (Mellen & Sommers, 2003). In fact, at the 2011 Conference on College Composition and Communication, Chris Anson (2011) presented findings on a study of oral- versus print-based feedback, arguing that talking to students about their writing provides them with more information than written comments.
While video feedback has been favored by some students, recent reports have shown that most students would still rather meet with their instructor face-to-face than receive video feedback. Warnock (2008) found that students preferred face-to-face contact as the best way to get teacher feedback but also greatly preferred video feedback over written comments. Given the impracticalities of a teacher meeting one-on-one with every student on every writing project in a writing course, Warnock's findings seem to encourage the consideration of video feedback in the writing classroom. Students have also reported enjoying video feedback because it appeals to their own individualized learning styles because it contains both audio and image (Ice et al., 2010; Vincelette, 2013). Because of this fact, Denton, Madden, Roberts, and Rowe (2008) found that students believe video feedback is much more valuable than written feedback. Crook, Mauchline, Maw, Lawson, Drinkwater, Lundqvist, Orsmond, Gomez, and Park (2012) found that video feedback was especially helpful to certain demographics who may otherwise be unable to meet with their instructors face-to-face. Specifically, the authors found that video feedback was "especially important for part-time, over-seas and distance learners" (p. 395).

In L2 contexts, it is easily apparent why Palmeri (2012) has argued that L1 classrooms have always been multimodal and that the field of composition has a "rich multimodal heritage" (p. 149). Over 50 years ago, Gottschalk (1965) found that by using television in class, L2 students learned more easily. However, the majority of scholarship to follow this study does not focus on how video might help L2 students revise and improve written compositions; rather, scholarship focuses on how video can facilitate second language acquisition and grammar skill development. For example, decades after Gottschalk's findings were published, Swaffar and Vlatten (1997) argued in favor of using video in the L2 classroom because it exposed students to "authentic materials and to voices, dialects, and registers other than the teacher's" (p. 175). And numerous
more recent studies have discussed how the inclusion of visual elements help L2 learners improve their vocabulary (Al-Seghayer, 2001; Chun and Plass, 1996; Plass, Chun, Mayer, & Leutner, 1998, Yoshii, 2001).

While interest in video in the L2 classroom continues to be a popular research topic among L2 scholars (Warschauer, 2010), scholars are beginning to realize that "no studies seem to have explored [video feedback] on ESL learners' texts" (McGarrell & Alvira, 2013). Hyland and Hyland (2006) have also argued that L2 scholarship is currently not paying close enough attention to emerging, alternative feedback techniques. This is startling when coupled with the fact that leading scholars in L2 composition regularly argue that providing feedback is one of the L2 writing teacher's most important tasks (Ferris, 2007). This is also startling due to the fact that, as previously mentioned, most L2 writing courses have adopted L1 composition's process pedagogy which requires instructors to provide commentary regularly to students.

**Learning Style Pedagogy and L2 Writers**

Throughout the last few decades, it has become increasingly clear how important paying attention to our students' cultures can be in educational settings. As mentioned above, Witkin (1976) found that people think and process information different due to cultural differences. As a result of such findings, Gonzales and Roll (1985) would later posit that standardized means of assessment should be abandoned as a result of cultural difference in cognitive processes. Similarly, Young (1987) stated that "the teaching of English to speakers of other languages . . . does not occur in a sociocultural vacuum. The culture of the learners . . . derives from the culture of the communities in which they grow up" (p. 15). If we accept the above arguments as truth, then it can be argued that "ESL students may use most of their time and effort trying to adjust to their new learning situations. Therefore, identifying the learning style preferences of L2 students
may have wide-ranging implications in the areas of curriculum design, materials development, student orientation, and teacher training" (Reid, 1987, p. 88).

What's more is that scholarship began to emerge in the 1970s that consistently found self-reporting surveys to be a valid means of measuring and analyzing one's learning style in which the participant answers questions to identify their own learning style (Babich et al., 1975; Dunn, Dunn, & Price, 1979; Reinert, 1970). This was tested specifically with undergraduate students, and Dunn (1984) found that self-reporting surveys allowed students to correctly identify their own learning styles, especially when an element of the survey involved some type of ranking/rating system. While these findings were unquestionably substantial, Domino (1970) found that if L1 undergraduate students' learning styles were determined and students were taught via a method that matched their identified learning style, student achievement greatly increased compared to students in the same class that were taught via a method that did not match their learning style.

Despite numerous significant findings in regard to L1 students, Reid (1987) pointed out that as of the late 1980s there was "no published research that describes the perceptual learning style preferences of [L2 students]" (p. 91). Reid (1987), with no literature to couch her study in relation to, found that Arabic students were largely tactile learners and that Japanese students had no clear preference, seemingly valuing each style the same. This gap in research in regard to learning style preferences and L2 students continued throughout the 1990s as Dunn (1993) once again pointed to the fact that L2 students' "learning styles have been ignored and have been considered as an insignificant component in the learning process" (p. 9).

Unfortunately, little seems to have changed. More recently, Mulalic, Shah, and Ahmad (2009) argue that "teaching and learning styles should be of the greatest interest to educators,
particularly the relationship between the two. However, one of the weaknesses of learning style research is the lack of investigation into the matching of teaching and learning styles" (p. 10). In one of the only studies to explore this particular issue, Felder and Henriques (1995) found that when an instructor’s teaching style does not correspond to a student’s learning style, the resulting mismatch can have unfortunate consequences for the student’s learning and attitude toward the material.

For decades, the research mentioned above in regard to analyzing L2 learning styles remained the only viable sources of information. However, over the last decade, scholars have found a renewed interest in simply examining their undergraduate L2 students' learning styles. Cohen (2003) surveyed L2 learners and argued that L2 students should be given information via a method that matches their learning styles. In a recent and comprehensive study, Xiao (2006) compared L2 students' learning styles to the findings of Reid (1987). While Reid (1987) found that Arabic students were tactile learners and Japanese students had no clear preference, Xiao (2006) found that the learning styles of students have changed and hypothesized that this may be due to globalization and the amount of communication taking place on social networking sites.

So while there seems to be a need to investigate the connection between how L2 instructors provide information to L2 students and L2 students' learning styles, the current trend in regard to research on learning styles and L2 students seems to be analyzing how learning styles impact the ways in which students learn vocabulary, work in pairs during class sessions, and acquire English as a second language. For example, Kavaliauskiene (2003) studied 43 L2 students to determine if they preferred working in pairs or alone. Yeh and Wang (2003) pointed to how simply taking L2 learners' learning styles into consideration can significantly positively affect the language acquisition process. Riazi and Riasati (2007) furthered the work of
Kavaliauskiene (2003) and investigated 219 L2 students to further examine if they preferred to work collaboratively or alone. Their study also determined that L2 learners preferred to learn vocabulary in different ways from one another. Biddadi and Yamat (2010) studied 92 L2 students to determine the link between learning styles and whether students preferred conversational or academic voice in textbooks. Wong and Nunan (2011) studied 110 L2 students and found that learners had drastically different learning styles and patterns of language use and put forth the argument that teachers should adapt their classrooms to account for students' various learning styles.

Although these studies only provide a snapshot of the research that has been conducted regarding NNS and learning styles, researchers tend to agree that learning styles impact student outcomes. Going back to Witkin (1976) and his claim that culture impacts learning styles, instructors of L2 learners, who can have a large number of varying cultures in one classroom, would have an exceptionally difficult task of catering each lesson to individual learning styles. One way to meet L2 students' learning styles may be through providing feedback based on previously determined learning styles, but this question has yet to be properly researched or answered. In the studies mentioned above, 464 L2 students were studied in regard to their learning styles but these students were not asked how receiving feedback in a modality that more closely aligned with their learning style could either benefit or hinder their educational experience while studying abroad. To speak more broadly, zero studies have investigated the connection between learning styles and L2 learners' performance and/or comfort with writing projects. I hope to begin to address students' preferences in future research.
Meeting Students' Learning Styles through Digital Audio and Video Feedback—Continuing the Conversations

Moody (1988) argued that "one cannot expect a student to adapt to the instructor. Rather, the instructor must design approaches that will take advantage of the student's unique talents" (p. 389). Although studies involving student motivation have been a recent, emerging trend in L2 contexts, L2 students' low motivation may have more to do with mismatches between students' learning styles and the instructor's teaching style than anything else.

We should work to examine if becoming aware of our L2 students' learning styles can help instructors guide students more effectively, increase student achievement, and/or increase student comfort levels. As indicated in the introduction to this literature review, scholars have already documented the fact that L1 and L2 students learn and compose differently due to both linguistic and cultural differences. Additionally, we also know that a multitude of instructors in both L1 and L2 settings have experienced success when implementing audio and video feedback. We also know, as indicated in this literature review, that providing our students' information in a way that aligns with their given learning style can directly help that student succeed in a number of ways. Now, what must be further explored is whether or not providing L2 students with feedback in a modality that matches their identified learning style can raise a given student's comfort and achievement levels. Exploring this area of research that L2 scholarship has not thoroughly investigated—the use of audio and video feedback on overall writing ability and student comfort levels—allows us to explore how such feedback methods can be used to match our students' learning styles. Also, I believe we should take every chance available to explore alternative feedback options in the studies we conduct because numerous studies have found that written feedback is highly problematic, but, according to Beach and Friedrich (2006), it
continues to be used more than any other form of feedback simply due to the fact that it is what it most widely used—not because it has the most affordances for the student.

I firmly believe that my proposed study can begin to fill in this current gap in scholarship and provide a wealth of information that can further multiple important conversations that have been ongoing in our field for decades. At the very least, this study should help student participants by exposing them more fully to digital and multimodal texts. Kress and van Leeuwen (2001) point to the fact that our society has become increasingly reliant upon texts that include a number of modes, such as print, sound, image, and video. Today’s undergraduate students, no matter their cultural background, live in a world in which they are immersed in digital and multimodal messages. If we can find a way to build individualized, learning style based digital feedback into our courses while also directly serving the students in regard to comfort and achievement levels than such a practice should be investigated with the hope of making our classrooms more useful and effective for our students’ writing skill development.

**Overview of Study**

This dissertation study builds on the conversation mentioned above and fills current gaps in scholarship by analyzing the feedback preferences of students enrolled in two sections of ESOL 1010: Academic Composition II at Bowling Green State University during the fall 2015 semester and whether or not those preferences match their identified learning styles. Additionally, this study seeks to examine how providing feedback in different modalities impacts student comfort levels. The study also explores if a participant's preferred feedback method matches their preferred learning style. Finally, the study examines the impact each feedback method had on student performance as measured by the grade received on essay assignments during the fall 2015 semester. Surveys were provided to students in week 1 and week 15 of the
fall 2015 semester. A learning style inventory survey was provided to students in week 1 of the fall 2015 semester.

More specifically, this study answers the following three research questions:

1. Do L2 students enrolled in ESOL 1010 courses at BGSU prefer receiving audio, written, or video feedback from their instructor on essay assignments?

2. What is the relationship surrounding L2 students' feedback preferences and their identified learning styles as tested by a learning style inventory survey?

3. By providing feedback to students in varying modalities that both match and do not match their identified learning styles as well as their stated preference for feedback, how do instructors impact student achievement teaching undergraduate L2 students?

*Brief Rationale for Method Selection*

Because the study's main interest is in students' perceptions and due to the fact that little previous data or theories have been generated on the subject, a grounded theory approach is best. As Creswell (2009) states, grounded theory is a "qualitative strategy of inquiry in which the researcher derives a theory . . . grounded in the views of participants in a study." Glaser (1992) argues that grounded theory excels at discovering the participants' main concern in regard to an issue, which will be important when identifying L2 students' attitudes toward receiving various forms of feedback. Thus, these scholars have positioned grounded theory as meeting my goals for this study.

*Brief Rationale for Participant Selection*

The participants for my dissertation research come from two sections of ESOL 1010 that I was the instructor of record for during the fall 2015 semester at BGSU. In total, there are 32 undergraduate L2 students in this study from my own sections of ESOL 1010 at Bowling Green
State University. As Duff (2008) states, when it comes to case study research, "the selection of cases is primarily based on opportunistic convenience sampling" (p. 114). This was, then, also one of the primary driving forces the case here as this student population was by far the most convenient for me to study.

In addition to convenient access to the target population, ESOL 1010 students were selected because some of the invitees would come from ESOL 1000. Some of these students would have previously received feedback on their writing assignments in ESOL 1000. This experience with feedback at the university level will better help the students answer the surveys that will be handed out during the first week of class. Students enrolled in ESOL 1010 also have a higher proficiency level due to the experience gained in ESOL 1000 or as a result of their higher placement in the course sequence. This may have enabled them to better understand the survey and provide more details in their responses, thus providing the most useful set of data possible.

Data Collection Procedures

Data collection took place during the fall 2015 semester in the two sections of ESOL 1010 for which I am the instructor of record. During week 1, all potential participants had the conditions of the study explained to them, and a consent form was distributed. Participation was completely voluntary, and my dissertation chair, Dr. Lee Nickoson, agreed to collect the consent forms on my behalf so that I was not aware of who decided to participate until the semester concluded. This way I was not influenced by any prior knowledge of which students have agreed to participate in the study. All students in the section were invited to complete two hardcopy surveys in the first week of class, which were distributed to them directly by me. The surveys were then be placed in a locked safe at my home. All students (both participants in the study as
well as the other students in the course) completed each assigned essay assignment as they
normally would in an ESOL 1010 course. Throughout the semester, all students (both participant
and non-participant students) received written, audio, and video feedback on different essays.
Participants then completed a third paper copy survey directly distributed by me during week 15
of the fall 2015 semester. All surveys took no more than 10 to 20 minutes to complete regardless
of a student's proficiency level. These surveys, too, were placed in a locked safe at my home in
the same location as the initial surveys upon completion. After the final set of surveys was
completed, the participants had no other action requested of them. All other activities they
engaged in during the course of the semester were standard, non-unique tasks that are regularly
delegated to students of ESOL 1010 courses.

Data Analysis Procedures

A grounded theory approach was used to analyze, code, and categorize survey responses.
I began by analyzing survey responses by looking for codes, then concepts, then finally
categories. As Strauss and Corbin (1998) suggest, I began with the open coding process where I
categorized the data and then grouped the data into related concepts. Once concepts began to
emerge, I was able to move into the theory building phase in regard to the participants'
responses. I entered the study with absolutely no preconceived notion of what I may find—an
ideal setting to implement a grounded theory approach to data analysis and theory formation.

Known Researcher Biases

As an instructor of L2 students, I had some biases going into this project. By
investigating the research questions outlined in this essay, I am asking that we as instructors
strive to provide our students with the most comfortable and useful learning environments we
can. In other words, I believe that many L2 students who may identify as visual-auditory
learners, for example, could become better writers if instructors worked to provide those particular students with video feedback on their essays rather than providing them with written feedback. However, this was only a hypothesis. I also found it just as likely that the results of this study could show no significant impact whatsoever in regard to student achievement or comfort levels.

Rationale for Feedback Technology Used

For purposes of this study, video feedback has been provided to students using the free version of Jing®, which can be found online (www.screencast.com). One advantage to using Jing® is that it is free to use and also provides free online storage of created video files. Although other programs offer more features than Jing®, many of the programs must be purchased in order to use them and average a cost of over $100. It was with intent that I chose a free software platform so that the study could be replicated by future researchers with little extra burden. Additionally, Jing® also limits the length of feedback so that no video can be more than 10 minutes in length, which was another strategic reason for selecting the software due to the fact that Dunne and Rodway-Dyer (2009) have found that students feel that digital modalities of feedback that exceed 10 minutes are too lengthy. Another affordance to the Jing® software is that video files remain in a secure, private location. Videos uploaded by instructors to Jing® are not searchable and require specific passwords to view that can be shared privately between the student and the instructor. Additionally, Jing® is unique in that there is a small but growing number of articles discussing the software that this study will be able to contribute to. Both Thompson and Lee (2012) as well as Harper, Green, and Fernandez-Toro (2015) have found that teachers, tutors, and students enjoy using Jing®, citing that the software leads to increased student engagement and that Jing® allowed teachers to be clearer with their explanations.
Because very few studies on audio feedback specifically cite the technology that was used to create audio recordings, and for reasons of familiarity and access, I used the software, Sound Recorder®, to create audio files for this study. Sound Recorder® is free software that comes pre-installed with Windows 8.

**Analysis of Research Questions, Data Required, and Data Collection**

The chart below shows what data was required to answer each of the 3 research questions outlined above as well as the method of data collection that was used to obtain such data.

<table>
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<tr>
<th>Research Question</th>
<th>Data Required to Answer Research Question</th>
<th>Method of Data Collection</th>
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<tbody>
<tr>
<td>1. Do L2 students enrolled in ESOL 1010 courses at BGSU prefer receiving audio, written, or video feedback from their instructor on essay assignments?</td>
<td>• Opinions of participants from written survey responses</td>
<td>• Classroom observation</td>
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<td></td>
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<td>• Pre- and Post-Surveys</td>
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<td>• Analysis/Coding</td>
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<td>• Instructor Field Notes</td>
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<tr>
<td>2. Do L2 students' feedback preferences match their identified learning styles as tested by a learning style inventory survey</td>
<td>• Learning style survey data • Opinions of participants from written survey responses</td>
<td>• Classroom observation</td>
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<td></td>
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<td>• Pre- and Post-Surveys</td>
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<td></td>
<td>• Instructor Field Notes</td>
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<tr>
<td>3. By providing feedback to students in modalities that both match and do not match their identified learning styles, how do instructors impact student achievement and when teaching undergraduate L2 students?</td>
<td>• Teacher observation of students • Opinions of participants from written survey responses • Analysis of student achievement levels</td>
<td>• Classroom observation</td>
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<td></td>
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<td>• Pre- and Post-Surveys</td>
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<td>• Instructor Field Notes</td>
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**Chapter Abstracts**

*Chapter 2*

The second chapter provides a discussion of the methods and methodologies for data
collection and analyses used in the study as well as a discussion of my own role as teacher/researcher. This chapter discusses the research site, the participants, the methods for data collection and analysis, and an explanation of why a grounded theory methodology was the best fit for the study. This section also specifically discusses the 3 research questions that serve as the driving force behind the project.

Chapter 3

Based on the categories that emerged from the data analysis process, Chapter 3 moves into a discussion of what learning styles and feedback preferences were found among the participant population. Findings are discussed in relation to participants' cultural backgrounds and are also analyzed in relation to previously published scholarship.

Chapter 4

Chapter 4 moves into a discussion about how the different modalities of feedback impacted student achievement levels among participants. This chapter discusses and explains the findings through various specific lenses. The purpose here being to fully illustrate as many of the significant connections and categories as possible to build a framework for this newly generated theory. The new theory is then discussed in detail, and specific situational contexts are given for the theory.

Chapter 5

The final dissertation chapter synthesizes the findings from chapters 4 and 5 as well as show the significance of this work to the broader fields of Rhetoric and Composition and TESOL with an emphasis on classroom practice. As I gathered more data than can be used in this proposed project, this conclusion chapter will also include a discussion of next steps and further research. Finally, I make suggestions for a focus on restating the need for continued research in
regard to L2 learners and learning styles while reiterating that learning styles should be valued as an important component of teaching L2 students.

**Conclusion**

Jordan (2012) asked compositionists to rethink the ways in which we instruct and discuss L2 students as we often label them as linguistically deficient and regularly instruct and assess L2 students the same regardless of their diverse cultural backgrounds. He argues that we must make the writing classroom a space that values cultural and linguistic variance if we are to be "productive, pragmatic, and ethical" (p. 139). Chapter 1 of this dissertation has highlighted the fact that we understand far less than we need to in regard to L2 writers, and we will likely only have more questions in the years to come. As we move through the technology-dependent 21st century, another major concern in regard to L2 writing classrooms is—and will continue to be—the use of technology for providing feedback.

Selfe and Selfe (2008) outline three key reasons why we should consider multimodal compositions in the classroom that can also easily be seen as reasons to utilize multimodal feedback as well. Specifically, the authors argue that humans naturally communicate using multiple channels of communication that require multiple literacies and multiple intelligences. Secondly, Selfe and Selfe (2008) remind us that literacies are not static, meaning that writing is continually converging with new technologies that teachers should work to expose students to. And, finally, the authors posit that workplace demands have changed so immensely from decades prior that today's students must be knowledgeable in regard to how to communicate (both as the provider and receiver of information) in digital spaces successfully.

Therefore, I believe that it is critical for composition scholars to conduct a plethora of research in regard to the influence technology may or may not have on students' writing and the
feedback process. It is my hope that this dissertation will work to further our understanding of how digital feedback methods impact L2 writing students and whether or not digital feedback can help us reach our students in more meaningful ways if the technology is in alignment with a student's particular learning style.
CHAPTER II.

RESEARCH METHODOLOGY: A GROUNDED THEORY APPROACH TO TEACHER RESEARCH

This chapter introduces the research methodology used for this study and how it has guided data collection, data analysis, and the overall development of theory. Firstly, a discussion of the importance of teacher research is provided. Next, background information, as well as fundamental guidelines common in different approaches to grounded theory methodology are provided. Then, the subsequent section describes the data collection phase of this study, which consisted of a learning style inventory and survey. Finally, the data analysis phase of this study is also discussed.

Teacher Research in this Dissertation Study

In addition to using a grounded theory methodology (discussed later in this chapter), it is with intent that this study is dependent upon teacher research. As a teacher, my primary interests are students' views, needs, and perceptions regarding their education. I believe that a teacher can learn much about how to improve his or her classroom and what his or her students need by collaborating with and listening to one's own students. Thus, by engaging in teacher research one is truly putting their students first in an effort to improve their teaching. Nickoson (2012) writes that teacher research is "a form of action research, the goal of which is improved teaching effectiveness that in turn, leads to the development of the teacher-researcher as pedagogue and investigator" (p. 104). And it is through action research that "teachers come to understand what is really happening in their classrooms (Hobson, 2001, p. 8).

This dissertation study has grown out of similar personal desires. I am incredibly interested in how teachers can use technology more effectively in the classroom, provide
feedback in more useful ways, work with and around language barriers, improve student achievement levels, and make stressful environments such as the writing classroom a more comfortable space for students to learn and work within. In other words, it was my own interests that lead to the start of this project. And although this study has a relatively small sample size (29 participants), teacher research does not require large sample sizes, which is another reason it was an excellent fit for this study. As Ray (1992) writes, "Some research can profitably focus on the detailed and the particular—on one classroom, even one student" (p. 175).

Teacher research is also unique in that provides researchers with a chance to share their results with other teachers, and it also provides other teachers with a demonstration of how valuable such inquiries can be to learn more about our student populations and motivate teachers to conduct their own action research. Teacher research can also empower educators at all levels to then make their own informed decisions about how to best improve the educational environments that surround them (Burnaford, Fischer, & Hobson, 2001).

What's more, the aim of this study goes beyond the linear process of conducting an investigation and presenting the results. At the heart of this study is my own desire to improve as a teacher and make transformative changes to my own pedagogy to better serve my own student populations. Thus, this study is not only an investigation into undergraduate ESL students' preferences in regard to feedback on essay assignments. It is also an investigation into how one teacher attempted to systematically change his own pedagogy and the curriculum of the course he is teaching. In many ways, I view this study, along with all teacher research, as a strategic method of embarking on the path of professional development. Fischer (2001) shares this attitude and writes, "Teacher action research is our personal narrative... our personal and shared vision..."
of what schools can be, and our moral dedication to improving our profession and society" (p. 47).

Teacher action research is about taking risks to improve the classroom. Teacher action research is about identifying a need for change and then taking action to make it happen. Teacher action research goes beyond wishing for change and doing nothing to make it happen. Instead, teacher action research is a deliberate action to make a desired change become a reality (Sergiovanni, 2004). This study attempts to do just that.

**Grounded Theory: A Brief Overview**

*Introduction*

Grounded theory allows the researcher to focus specifically on individuals' thoughts, feelings, and perceptions regarding any subject of study. As Creswell (2009) states, grounded theory is a "qualitative strategy of inquiry in which the researcher derives a theory . . . grounded in the views of participants in a study" (p. 13). Glaser (1992) also writes that grounded theory excels at discovering participants' main concerns in regard to an issue. Grounded theory provides researchers with a powerful means to learn much about a given study's participants, places an emphasis on participants' perspectives, uses an interactive process between the researcher and participants, and relies heavily on participants' words. However, these emphases are not inherently unique to grounded theory. In fact, according to Marshall and Rossman (1999), grounded theory shares many characteristics with all forms of qualitative inquiry: the researcher as instrument, the importance of context, the importance of the participant-researcher relationship, the possibility for flexible research design, and the potential for messy data.

What does make grounded theory unique is that, according to Glaser and Strauss (1967), the two scholars credited with developing grounded theory, theories developed using this
methodology are truly grounded in the data because researchers enter such studies with no preconceived notion of what results they may find. Glaser and Strauss' book, *The Discovery of Grounded Theory*, published in 1965, describes the authors' research strategies while studying dying patients in hospitals. In this study, they adopted an investigative research method with no preconceived hypotheses and continually compared and analyzed data while memoing about the trends they discovered. This process involves using multiple stages of data collection that examine interrelationships of categories of information (Charmaz, 2006). Glaser and Strauss (1967) maintain that a theory obtained via grounded theory is truly grounded in the data. For this reason, they named the methodology “grounded theory.” What is perhaps most important to note here is this dissertation study uses grounded theory for these same reasons mentioned so far in this chapter. Specifically, it was my intention to create a new theory grounded in the participants' perceptions rather than simply testing this study's results against existing theories. In fact, all studies guided by grounded theory share this common goal of wanting to explain phenomena based on the empirical data gathered during the study.

**Grounded Theory and the Data Collection Process**

Holton (2009) suggests that grounded theory should not be confined to any one lens and that as a general methodology, grounded theory can adopt any perspective appropriate to the data and stance of the researcher. To guide such a process, grounded theory uses a practice called theoretical sampling, which means that the sampling is based on theoretically relevant elements and are selected according to previously established criteria specified by the researcher. Strauss and Corbin (1998) state that this enables the researcher to select participants that maximize the potential to discover as many dimensions and conditions related to the phenomenon as possible. In this dissertation study, the relevant elements to this particular investigation were that the
participants were currently enrolled in undergraduate ESL writing courses. Additionally, to do as Corbin (1998) states, I selected participants who were enrolled in my own courses so that I could have the opportunity to observe as many phenomena as possible in relation to my research questions during the study.

According to Davidson (2002), many studies use open sampling to identify individuals, objects, and documents so that the data’s relevance to the research question can be assessed early on before too much time has been invested in the project. This does not differ from the definition of theoretical sampling Glaser and Strauss (1967) put forth decades earlier which defines the method as "the process of data collection for generating theory whereby the analyst jointly collects, codes and analyses [their] data and decides what data to collect next and where to find them, in order to develop [his or her] theory as it emerges" (p. 45). The most common instruments for data collection, according to Dick (2005), are the use of surveys and interviews. However, it seems that any data collection method could be used, such as focus groups, researcher observations, conversation, or any other individual or group activity which has the ability to provide data. For the purposes of this study, I primarily used surveys to collect data from the participants.

When using grounded theory, the data collection process and the data analysis process actually occur in an alternating, simultaneous sequence (see Figure 1). Numerous scholars have referred to this incredibly detailed process (which is further explained in the Coding and Data Analysis Processes section later in the chapter) as a repetitious cycle of induction and deduction that consists of a constant process of data collection combined with regular comparisons between previous results and new findings in order to guide the next round of data inquiry (Strauss and
Corbin, 1990; Miles and Huberman, 1994). Again, this is a crucial characteristic of grounded theory due to the fact that the development and identification of variables do not take place prior to data collection. It is instead completed as part of the data collection process due to the study beginning with no preconceived hypotheses in regard to anticipated findings. For several weeks after the final surveys were collected, I created numerous memos while also analyzing those memos for common themes. Each time a new theme or commonality was discovered, I reassessed the entire body of surveys to investigate further connections in a new round of data inquiry. Data were collected this way until, as Strauss and Corbin (1998) state, "theoretical saturation" occurred, which the authors define as the moment when no new relevant data or categories of data can be found and key relationships between the categories of data that have been discovered are clearly established and defined. Once I felt no further key relationships could be unearthed, I felt comfortable ending the data collection process and began moving from the first three processes required to build a grounded theory (as seen in Figure 1) toward the
actual building and developing of a new substantive grounded theory. In other words, I moved to the process of data analysis with intent to develop theory.

**Coding and Data Analysis Processes**

At the risk of sounding a bit didactic, those less experienced with grounded theory may benefit from the detailed presentation of the data analysis process when using grounded theory that follows. If familiar with this process, the reader may choose to skip ahead to the following section, "The Use of Grounded Theory in this Dissertation Study," for an explanation of how the process of developing a grounded theory was specifically used in this study.

That said, survey or interview analysis and coding is done with the intent to capture what has been presented in the data. The researcher must deeply analyze the data to make sense of the participants' responses and feelings those responses represent. Charmaz (2006) points out that the coding process is the very first step of data analysis and assists the researcher in realizing what connections and interpretations of the data are present.

Proponents of grounded theory suggest several techniques for coding so that the data can be examined through various lenses and at differing levels. Strauss and Corbin (1990) provide several guidelines for coding when engaging in a grounded theory analysis of data. The first is what is known as "open coding." Strauss and Corbin (1990) explain that the open coding phase is when researchers form initial categories from the data. Specifically, the authors write that this is the "process of breaking down, examining, comparing, conceptualizing, and categorizing data" (p. 61). This is an important time for the researcher as this is when they will begin to produce a list of themes that seem of great importance to either survey respondents or interviewees. Short memos and labels are then applied to participants' responses, and these labels are known as "codes." These codes will then later be used to form concepts (discussed later in this chapter),
which mark the beginnings of the data analysis process. By analyzing the data in this manner, Strauss and Corbin (1998) suggest that this helps open the data to the researcher in new ways that help test the researcher's assumptions as well as help the researcher understand what the data indicates. During this open coding phase, I found there to be several key connections in the data. These connections are discussed in detail in Chapter 3 and Chapter 4 of this dissertation and serve as the foundation for the creation of a new substantive theory, "A Multistyle Approach to Feedback in the L2 Writing Classroom at Bowling Green State University." The implications of such connections as well as the theory at large are more broadly discussed in Chapter 5.

After the open coding process, the "axial coding" phase begins. During this phase, data is assembled in regard to previously identified properties and dimensions (Strauss & Corbin, 1998, p. 123). During this process logic diagrams are regularly developed to explain relationships in the data and highlight specific phenomena, and Strauss and Corbin use them extensively. In fact, according to Strauss and Corbin (1998), researchers should locate a phenomenon within the full range of macro and micro conditions in which it is embedded and trace the relationships of subsequent interactions through to their consequences.

However, Charmaz (2006) presents a more simple view of axial coding and states that axial coding can simply be seen as the reassembling of data in new ways after it has been categorized by detailed coding. Charmaz warns against using the axial coding phase because the process can be too formalized and rigid. Charmaz suggests that we rely simply on theoretical sampling, which asks the researcher to explore the categories that were developed during open coding with an open mind. I agree with Charmaz's (2006) argument, and found the axial coding phase to be an unnecessary, over-formalized step in the coding process as the open coding phase allowed me to fully understand what the data indicated in regard to theory formation.
The final coding process in grounded theory is what is known as "selective coding." Strauss and Corbin (1990) define this step as “the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development” (p. 116). This process demands that the researcher begin systematically selecting the codes that best represent the participants' voice. It is during this phase that hypotheses about the data can begin to be formalized as clear connections in the data should be presenting themselves at this time. While it is clear that the overall coding process certainly provides a basis for analysis, it also, as Charmaz (2006) points out, gives us the link between the researcher's view of reality and the participants' view of it. The selective coding phase allowed me to easily and clearly identify the core category: Participants overwhelmingly preferred video feedback regardless of their diverse backgrounds.

Although these phases are presented sequentially it is certainly possible for there to be overlap as the coding and memoing process are completed at the same time (see Fig. 1). For example, the researcher may also choose to return to memoing after the selective coding process to begin collecting new data. The researcher can then analyze and code that new data and use the new information draw comparisons to the previous round of data collection. This constant comparing of data (known as the Constant Comparative Method) only ends when the researcher feels there is a strong enough theoretical understanding the data to move forward and begin developing concepts and categories. I, too, returned to the data once the selective coding process ended to look for new and final connections in regard to the core category before ending the data collection process.

Developing concepts is described by Allan (2003) as the process of analyzing themes in the codes the researcher has found during the coding process. Allan states that these
commonalities are what are known as concepts, and these concepts can be used to create categories, which are yet even higher order commonalities. Here again, I feel it important to note that the process of developing concepts can overlap with the three phases of coding (discussed earlier in this chapter) due to the cyclical nature of grounded theory, and this was an ongoing, constant process during the data collection phase in this study.

Allan (2003) writes that concepts are then grouped and regrouped to find commonalities called categories that lead to the emergence of a theory. In other words, after systematically numerous surveys or interview responses, the researcher will likely notice many issues that seem important to the participants. These similarly identified issues become a code and/or concept. Then, the concepts with similarities can be formed into categories, which can be linked together to form a theory. Strauss and Corbin (1998) argue that it is these categories that have true power due to their ability to explain existing data and also be used to predict and theorize about the future.

Although numerous categories may emerge, the goal for the researcher, according to Strauss and Corbin (1998), is to find a distinctive category that seems to fuel the developing theory and is one that sufficiently summarizes the majority of what the researcher has unearthed in the data. In other words, the authors suggest that the researcher should work to find one core category that all other categories relate to that will drive the theory making process. As stated earlier, the main category discovered here was that the participants overwhelmingly preferred video feedback regardless of their diverse backgrounds.
The Use of Grounded Theory in this Dissertation Study

Introduction

Data collection and analysis were typical of a study using grounded theory. Early findings were used to inform each next iteration of memoing and data analysis. Details about sampling approaches for the data collection phase can be found in later sections of this chapter. For this study, open coding was used without the help of specialized electronic data analysis software. Surveys were coded through the use of pen and paper, sticky notes, and Microsoft Excel. Axial coding was not used in this study; rather, careful, constant comparisons between participants' statements as well as between codes and categories were used. This way I could engage with the data without feeling restricted and without running the risk of misinterpreting or skewing participants' words to fit predetermined properties and dimensions.

My decision to implement grounded theory was based on the fact that this study's research questions explore numerous current gaps in scholarship related to whether students prefer written, audio, or video feedback from their L2 writing instructors, whether those preferences relate to their learning styles, and whether instructors impact students (and to what degree) when they provide various modalities of feedback (a more detailed description of this study's research questions is found in Chapter 1). As a result, I found it unsuitable to simply couch the results of this study in relation to other theoretical models because none currently exist that fully encompass what is being explored and investigated in this study. There is currently no theory regarding NNS, learning styles, and multimodal feedback in regard to university writing students' feelings, perceptions, and academic achievement levels. Thus, to truly begin forming a theory in regard to these gaps, the focus needed to be on participants' experiences and feelings as
well as the results of using various forms of feedback. Grounded theory is the most effective methodology to explore this subject through the participants' eyes.

Before providing more detail on how grounded theory was used in this study, it is important to note one area of debate among grounded theory scholars in regard to the research process. Scholars tend to disagree about when researchers should begin developing and writing the literature review for studies using grounded theory. For example, Glaser (1978) has argued that the literature review should not be conducted until the findings of the study have been coded and categorized so the researcher is not influenced by the ideas of others before the study begins. However, Charmaz (2006) has argued in favor of completing the literature review before data collection to learn whether similar research has already been conducted. This is a crucial difference of opinion due to the fact that the researcher cannot enter the study with a truly open mind to the research question if previous research has been conducted—thus, Charmaz's (2006) approach can be seen as one that is not fully situated in the traditional principles of grounded theory outlined by Glaser (1978). Although I strongly agree with Glaser's position, my graduate program's requirements for dissertation topic approval required the completion of a literature review and graduate lecture prior to data collection and analysis. Thus, I was not able to enter the study in the exact mindset I had originally hoped for due to the fact that I was required to conduct a literature review and present previous findings in regard to the topic prior to data collection and analysis; however, Charmaz (2006) would argue that the mindset I did enter the study may actually be preferable because I entered the study with a complete understanding of previous research; thus, there are strong benefits to such a process as well and I by no means aim to suggest that the programmatic requirements outlined above drastically impacted my research/study in an overwhelmingly negative way and/or greatly impacted the data collected. In
fact, by completing a literature review and presenting a graduate lecture prior to data collection and analysis, it is an undeniable fact that I was better prepared for the study overall.

Theory Formation: Substantive and Formal Theories

Grounded theory was used in this dissertation study to develop a new theory. Scholars have shown that theories developed through the use of grounded theory are either a substantive theory or a formal theory. Strauss and Corbin (1998) explain the difference regarding the two types and define a substantive theory as one that is specific to a given setting or situation. Formal theories differ, according to the authors, in that they tend to explain broader concerns and problems. Charmaz (2006) explains how several substantive theories can be used to then create and explain a formal theory but admits that most grounded theories are substantive in nature.

In sum, I used grounded theory with the intent to develop a substantive theory. The theory I developed is substantive in nature due to the fact that it explores a particular area; that is, the relationship between multilingual writers at Bowling Green State University, their learning styles, and multimodal instructor feedback in writing classrooms. I did not explore the creation of a formal theory due to the fact that the specific setting and goals of the dissertation study were simply not transferable to all classrooms, universities, etc.

Memoing

Memoing is a crucial part of coding and developing categories. Memos were used in this study to help support the research effort by keeping documented records of thoughts and ideas that arose during data analysis. Specifically, I used memos to reflect on survey responses and codes to develop an ongoing and continual conversation between memos about the participants' responses. Memos were written on all hardcopy surveys, sticky notes were also used and placed
on relevant surveys, and memoing was heavily relied upon while both entering and analyzing data after it was entered into multiple Microsoft Excel spreadsheets (see Fig. 2).

Figure 2. Excel Spreadsheet Used to Enter, Organize, Code, and Analyze Data

During the data analysis process, I returned to my initial memos, reflected upon them, created new memos, and considered an overall analysis. Specifically, memos were used as reminders, as connectors between participants' similarities and differences, to ask questions about the data, to ask myself questions, to ponder about the individual participants, to theorize about the potential meanings of patterns in the data, to note specific patterns, to begin hypothesizing, to note which category may be the main, distinctive category, and to compare concepts to one another as well as against what was found in my initial literature review.

Criteria for Grounded Theory Studies: Standards and Validity

Strauss and Corbin (1990) outline the following four requirements for judging grounded theories:

1) The theory should result from the analysis of diverse data
2) The theory should improve understanding and be understandable

3) The theory should be clear about which contexts it applies to

4) The theory should provide a clear explanation of which conditions the theory applies to

Charmaz (2006) expands on these criteria and presents the following 4 criteria that grounded theories should strive for:

1) Credibility

   - Are there strong links between gathered data and argument?
   - Are data sufficient to merit claims?
   - Do categories offer a wide range of empirical observations?
   - Has the research provided enough evidence for the researcher's claims to allow the reader to form an independent assessment?

2) Originality

   - Do the categories offer new insights?
   - What is the social and theoretical significance of this work?
   - How does the grounded theory challenge, extend, refine current ideas, concepts, and practices?

3) Resonance

   - Do categories portray fullness of the studied experience?
   - Does the grounded theory make sense to the participants?
   - Does analysis offer them deeper insights about their lives and worlds?
4) Usefulness

- Can the analysis spark further research in other substantive areas?
- How does the work contribute to knowledge?
- Does the analysis offer interpretations that people can use in their everyday lives/worlds?

Chapter 6 of this dissertation revisits Strauss and Corbin's and Charmaz's criteria and evaluates in detail how the criteria have been met by this study.

*Objectivist vs. Constructivist Approaches to Grounded Theory*

As grounded theory continues to evolve since the 1960s, so do scholars' approaches to the methodology. Glaser and Strauss (1967) originally suggested that theory is built from having no preconceptions about the data and simply observing and discovering truths present in the data. The assumption made by the authors here is that this means that every researcher who analyzes the same data should arrive at similar conclusions due to the objective and passive role the researcher takes. However, Charmaz (2006) has a constructivist approach to grounded theory and argues that knowledge gained through grounded theory is not truly objective because the researcher brings with them certain views of reality. Thus, according to Charmaz (2006), knowledge is constructed through a combination of both the researcher's worldview as well as the participants'. Because I believe that each researcher does bring a unique stance (set of beliefs and personal history) to a given study, I was inspired greatly by Charmaz's view and I disagree with the argument that the same conclusions would be drawn by any researcher due to the fact that it is my belief that reality is not objective or neutral. Thus, it is possible that the findings of this study could differ if a researcher other than myself analyzed and coded the data due to the likelihood that our view of reality would differ in some way. While this does not discredit the
findings of a grounded theory study, it does illustrate the point that researchers could find varying key categories during the selective coding process. Therefore, I believe that a researcher's biases influence how a researcher analyzes and interprets the same data set when implementing a grounded theory methodology.

Limitations of Grounded Theory

Any research methodology will have limitations, and grounded theory is no different. The most significant limitation scholars have pointed to is the fact that grounded theory can be too time-consuming due to the large amount of time needed for coding and data analysis (Barlett & Payne, 1997). The processes of coding and data analysis were certainly time consuming in this study as it took several weeks to memo and several more weeks to simply enter the data, though the use of Microsoft Excel allowed codes to efficiently be placed next to fields of data for quick reference and the use of sticky notes was particularly useful early on for finding initial themes in the data.

Rationale for Participant Selection

The participants in this dissertation study came from two sections of English for Speakers of Other Languages (ESOL) 1010: Academic Composition II courses that I was the instructor of record for during the fall 2015 semester at Bowling Green State University. In total, there are 29 undergraduate L2 students in this study. As Duff (2008) states, when it comes to case study research, "the selection of cases is primarily based on opportunistic convenience sampling" (p. 114). This was, then, also one of the primary driving forces here as this student population was by far the most convenient for me to study.

In addition to convenient access to the target population, ESOL 1010 students were selected because of the possibility that some participants could come from ESOL 1000, which is
the prerequisite course to ESOL 1010. Students previously enrolled in ESOL 1000 would have previously received feedback on their writing assignments in ESOL 1000: Academic Composition I. This experience with feedback at the university level should have assisted the students in answering the surveys that were handed out during the first week of class. However, during the data analysis phase, it was found that none of the participants in the study were previously enrolled in ESOL 1000. Even if students enrolled in ESOL 1010 did not take ESOL 1000 and placed directly into ESOL 1010, these participants still had a higher proficiency level than ESOL 1000 students as a result of being placed higher in the course sequence. It was my belief that the reasons listed here may have enabled participants, regardless of how they came to ESOL 1010, to better understand the surveys and provide more detailed responses; thus, providing a more useful set of data than students enrolled in ESOL 1000.

Ethical Considerations

Because participants were asked to sign consent forms during the very first week of classes in a language other than their L1, a major ethical consideration was that the students may have been confused by written documents during the recruitment process. As a result of this concern, during the first week of the semester an entire fifty-minute class session was devoted to explaining the study in great detail before asking students’ for their written consent in the subsequent class session. Terms related to the study were defined and discussed, and students’ rights were reviewed as well. Aims and objectives of the study were clearly defined together with an explanation of how and when surveys would be distributed, how data would be collected and analyzed, and contact numbers and emails for the Human Subjects Research Board at Bowling Green State University were provided to students so they could voice their concerns to someone other than the researcher if needed. I explained to my students and potential
participants that all data collected would be anonymised by replacing participants' names with code numbers and then would be safely saved on a password-protected computer. Students were asked to summarize the study and repeat definitions in their own words to demonstrate understanding rather than simply asking them if they had any questions, which would have only been met with yes/no responses. By the end of the session, it was clear to me that all students understood the study and their option to either participate or decline involvement and that their decision was not part of the required coursework nor played a role in impacting the teacher-student relationship.

_Rationale for Feedback Technology Used_

For purposes of this study, video feedback has been provided to students using Jing®, which can be found online (www.screencast.com). Two specific advantages to using Jing® are that it is free to use and also provides free online storage of created video files. Although other programs offer more features than Jing®, many of the programs must be purchased in order to use them and average a cost of over $100. It was with intent that I chose a free software platform so that the study could be replicated by future researchers with little extra burden. Additionally, Jing® also limits the length of feedback so that no video can be longer than 10 minutes in length, which was another strategic reason for selecting the software due to the fact that Dunne and Rodway-Dyer (2009) have found that students feel that digital modalities of feedback that exceed 10 minutes are too lengthy. Another affordance to the Jing® software is that video files remain in a secure, private location. Videos uploaded by instructors to Jing® are not searchable and require specific passwords to view that can be shared privately between the student and the instructor. Additionally, Jing® is unique in that there is a small but growing number of articles discussing the software that this study will be able to contribute to. Both Thompson and Lee
(2012) as well as Harper, Green, and Fernandez-Toro (2015) have found that teachers, tutors, and students enjoy using Jing®, citing that the software leads to increased student engagement and that Jing® allowed teachers to be clearer with their explanations.

Because very few studies on audio feedback specifically cite the technology that was used to create audio recordings, and for reasons of familiarity and access, I used the software Sound Recorder® to create audio files for this study. Sound Recorder® is free software that comes pre-installed with Windows 8.

Finally, written feedback was provided using hand written comments with a black pen (see Figure 3) as studies have shown that the color red can be viewed negatively by students and
may interfere with the communication of feedback to students (Dukes & Albanesi, 2013). Comments were also provided in this manner to ensure participants were provided feedback that they could hold in their hands to best present participants with a tactile modality.

*Instruments Used: The Learning Style Inventory and Opinion Surveys*

The Learning Style Inventory given to participants in this study was a modified version of the Perceptual Learning Style Preference Questionnaire (PLSPQ) that was originally developed by Reid (1995) specifically for learners of foreign languages. The PLSPQ focuses intently on how survey takers learn best using their visual, auditory, and tactile perceptions. Because of the fact that the PLSPQ focuses on whether or not a participant is a visual, auditory, or tactile learner, it served as a perfect companion to the video, audio, and written feedback the participants were provided with throughout the study and allowed for distinct codes and categories to be found in the data. Although numerous other learning style survey models have been developed and tested successfully (Dunn & Dunn, 1989; Felder & Silverman, 1988; Given, 2002), none focused specifically on the language learner other than Reid's model.

Reid (1995) defines the three learning styles as follows:

- **Visual**: Visual students like to read and obtain information from visual stimulation. These learners prefer using pictures, imageries, and spatial perceptions.

- **Auditory**: Auditory students are comfortable without visual input and learn from unembellished lectures, conversations, and oral directions.

- **Tactile**: Tactile students like lots of hands-on movement. They favor using body, hands, and tactile sense.
I made well-considered modifications to Reid's version of the PLSPQ for syntax to attempt to provide participants with the most easily understandable version of the survey as possible. Additionally, questions on the PLSPQ related to social learning styles (group or individual preferences) were removed from the survey as those responses are not a part of what is being studied in this dissertation project. The revised version of the Learning Style Inventory used in this study (see Appendix) presented all 29 participants with the same 24 statements to respond to and were all related to visual, auditory, and tactile preferences. Participants' responses were totaled and calculated by the researcher to determine each person's learning style preference. All paper-based surveys were distributed to students directly at the beginning of class periods, and were returned within two days of receipt to the researcher. A significant advantage to using surveys for this study rather than interviews was that a large amount of data could be collected in a much shorter period of time than would have been possible with interviews. However, a weakness of survey responses is that they are often less detailed than interview responses and they run a risk of being turned in with missing responses. After data analysis, there were no missing responses found.

Grounded theory is rooted in participants' perceptions, I felt it crucial for the Week 1 and Week 15 surveys used in this study to allow space for additional comments to get a complete picture of participants' feelings in regard to the given subject matter. Space was given for additional comments on both the Week 1 survey as well as the Week 15 survey. Still, only one such open-ended question was used in the Week 1 survey, and 4 were used in the Week 15

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3 It is important to note that because no participants in this study identified as having disability issues, my modifications did not need to account for issues regarding equal access. However, instructors should consider that the PLSPQ could be considered a problematic instrument if students were to identify as living with a visual, auditory, and/or a tactile disability.
survey due to the fact that open-ended questions can occasionally provide unusual or unfocused answers and such responses can be more difficult to analyze and code.

The Week 1 survey asked 24 questions in total. Thirteen of those questions were in regard to participants’ demographic information as well as their educational history and experience using various forms of software on personal computers. The remaining 11 questions asked participants to utilize a Likert scale to report how understandable, helpful, and valuable they thought video, audio, and written feedback would be during the semester. A Likert scale with only 4 options (an even number of possible selections) was used intentionally to eliminate the possibility of non-committal answers.

The Week 15 survey served as a follow-up to the Week 1 survey and asked participants to reflect on how understandable, helpful, and valuable they thought video, audio, and written feedback was during the semester. By using the same questions as the Week 1 survey, I could easily measure changing perceptions among individual participants as well as of the entire sample size. In addition to those 11 questions, 6 additional questions were provided that asked participants to reflect on how the various forms of feedback impacted their grades in the course, their levels of confusion about a particular assignment, their ability to make successful revisions, their perception of how friendly their instructor is, which feedback style they would prefer in the future in both their L1 and L2, why they would prefer that method, which feedback style lead to their best essay of the semester, which feedback style lead to their worst essay of the semester, and any other implications they wished to share. This approach is very quasi-experimental in that I am technically applying a treatment. However, I used such a design because I am primarily interested in independent variables that cannot simply be randomly assigned. In other words, my
research questions are analyzing variables that are innate characteristics of the participants involved in the study.

A visual representation of the detailed breakdown of each survey is provided below in Table 1: Survey Question Information, which further highlights and reinforces the differences between the two.

Data Entry

After initial memoing was completed on the paper-based copies in the form of sticky notes, the survey data was entered into Microsoft Excel for further analysis. The ability to use Microsoft Excel to neatly and quickly organize responses into lists, graphs, and charts helped provide an early, initial understanding of findings—though the data was extremely abundant at first (see Figure 4). Numerous spreadsheets were used to continually sort data in new ways to

<table>
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<th>Survey</th>
<th>Number of Participants</th>
<th>Total Number of Questions</th>
<th>Number of Questions Related to Demographics and Computer Experience</th>
<th>Number of Questions Related to Feedback Preferences</th>
<th>Number of Questions Related to Impact of Feedback Modalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>29</td>
<td>24</td>
<td>13</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Week 15</td>
<td>29</td>
<td>17</td>
<td>0</td>
<td>11</td>
<td>6</td>
</tr>
</tbody>
</table>
fully explore each of the participants' responses as well as the research questions this study set out to investigate.

Conclusion

This chapter has both introduced teacher action research and grounded theory to the reader as well as discussed their appropriateness for this study. It was explained that through use of grounded theory and the instruments discussed in this chapter, a substantive theory was developed in regard to the relationship between NNS, their learning styles, and feedback in writing classrooms. I have worked to provide a plethora of detail in regard to data collection, participant selection, technology selection, and ethical considerations and discussed why teacher research was appropriate for the study. Chapter 3, "Findings, Identified Learning Styles and Student Preferences on Feedback," as well as Chapter 4, "Findings, The Impact of Providing Learning Style-Based Feedback on Students," discuss the findings of the study in more detail.
CHAPTER III.

FINDINGS, IDENTIFIED LEARNING STYLES AND STUDENT PREFERENCES ON FEEDBACK

The following chapter discussion presents the categories that emerged from the data analysis process—the results of the learning style inventory, the week 1 survey, and week 15 survey—which were all used to ascertain students' learning styles as well as their perceptions of audio, video, and written feedback on essay assignments in the L2 writing classroom. Findings are discussed in relation to numerous variables throughout the chapter including the participants' age, gender, field of study, and native language. The data were useful in answering the study's first two research questions:

1. Do L2 students enrolled in ESOL 1010 courses at BGSU prefer receiving audio, written, or video feedback from their instructor on essay assignments?
2. Do L2 students' feedback preferences match their identified learning styles as tested by a learning style inventory survey?

This chapter explores (1) the detailed results of the learning style inventory survey; (2) an overview of numerous participant variables such as age, gender, computer experience, L1, and so on, and how those variables related to the participants' identified learning styles; (3) participants' feedback preferences in week 1 as well as in week 15; and (4) how valuable and helpful the participants viewed each form of feedback (audio, video, and written) in week 1 as well as in week 15. Results found in this study are analyzed alongside the results of Reid's (1987) seminal study on L2 speakers' learning styles in which a survey was used to determine 1,216 L2 students' learning preferences.
Learning Style Survey Results: A Majority of Visual Learners

As seen in Table 2, the results of the learning style inventory showed that the majority of the 29 participants identified as visual learners (65.50%), fewer as tactile learners (20.60%), and fewer still as auditory learners (13.70%). These results vary greatly from Reid's (1987) seminal study on L2 students' learning styles as she found that the majority of L2 students had tactile learning styles. This first finding immediately reinforces Xiao's (2006) argument that globalization and the rise of digital technology have likely led to a change in L2 students' learning preferences.

Age and Learning Styles

Reid (1987) did not find any major implications regarding the connection between age and learning styles for L2 students. After analyzing the data in this study, the same is true for the participants in this study. As seen in Table 3, when grouped by age, each age cluster had more

### Table 2: Overview of Learning Styles

<table>
<thead>
<tr>
<th>Number of Participants (% of Total)</th>
<th>Visual Learners</th>
<th>Auditory Learners</th>
<th>Tactile Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 (65.50%)</td>
<td>4 (13.70%)</td>
<td>6 (20.60%)</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: Learning Styles by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Visual Learners (% of Age Group)</th>
<th>Auditory Learners (% of Age Group)</th>
<th>Tactile Learners (% of Age Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18</td>
<td>1 (100.00%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>18-21</td>
<td>15 (62.50%)</td>
<td>4 (16.60%)</td>
<td>5 (20.83%)</td>
</tr>
<tr>
<td>22-26</td>
<td>2 (66.66%)</td>
<td>0 (0.00%)</td>
<td>1 (33.33%)</td>
</tr>
<tr>
<td>&gt; 26</td>
<td>1 (100.00%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
</tr>
</tbody>
</table>
visual learners than auditory or tactile learners. Only 1 participant in the study was under the age of 18 (17-years old) and identified as a visual learner. Similarly, only 1 participant was over the age of 26 (38-years-old), who also identified as a visual learner. Of the 24 participants whose ages were between 18 and 21, 15 (62.50%) identified as visual learners, 5 (20.83%) as tactile learners, and 4 (16.60%) as auditory learners. In other words, a visual learning style was preferred by all age clusters, and all age groups had the fewest amount of participants identify as auditory learners.

*Gender and Learning Styles*

Gender, a variable not explored in Reid's (1987) study, also shows the dominate nature of visual learning preferences among this study's participants. Of the 29 participants, 14 identified as female, and 15 identified as male, which can be seen in Table 4. Of the 14 females in the study, 10 (71.42%) were visual learners, 2 (14.28%) were tactile learners, and 2 (14.28%) were auditory learners. In regard to the 15 males in the study, there were 9 (60.00%) visual learners, 4 (26.66%) tactile learners, and 2 (13.33%) auditory learners.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Visual Learners (% of Gender)</th>
<th>Auditory Learners (% of Gender)</th>
<th>Tactile Learners (% of Gender)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>10 (71.42%)</td>
<td>2 (14.28%)</td>
<td>2 (14.28%)</td>
</tr>
<tr>
<td>Male</td>
<td>9 (60.00%)</td>
<td>2 (13.33%)</td>
<td>4 (26.66%)</td>
</tr>
</tbody>
</table>

Females identified slightly more strongly as visual learners than men by a difference of 11.42% but showed the same preference for both tactile (14.28%) and auditory (14.28%) learning styles. Men in the study, while still strongly identifying as visual learners (60.00%) overall, held an overall stronger preference for tactile learning (26.66%) than women as well as
auditory learning (13.33%). Nevertheless, regardless of gender, a visual learning style was preferred over both tactile and auditory learning styles4.

Field of Study and Learning Styles

One’s declared field of study is yet another variable that reinforced the dominance of visual learning styles in this study (see Table 5). When analyzed through this lens, each field of study was populated by a majority of visual learners except those in the humanities. 80.00% of those undecided about their major, 66.66% of Computer Science and Engineering majors, 66.66% of the participants majoring in the hard sciences, 100.00% of those studying medicine, and 66.66% of Business majors identified as visual learners.

However, just 50.00% of the participants majoring in the humanities were visual learners, and the other half (50.00%) identified as tactile learners. At the time of her study, Reid (1987) also found that visual learning styles were preferred the least by those majoring in the

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4 Although binary gender identification was used in this study, one’s gender identification was not assumed as participants reported their own gender identification via survey. While this study, then, purposely supports gender fluidity (Parker, 2016), such support problematizes the results discussed here as this study includes participants whose gender identification may or may not coincide with their sex (their biological identity at birth).
humanities. Perhaps there is some evidence here to support Reid's findings that students majoring in the humanities are more likely to not identify as visual learners. Further research into the learning style preferences of L2 students and their field of study may lead to more definitive answers.

Another finding that Reid's (1987) data reveal is that "Engineering and Computer Science majors were significantly more tactile than humanities majors" (p. 94). However, the results of this study strongly disagree with that claim. 66.66% of Engineering and Computer Science majors were visual learners, and just 16.66% of these students were tactile learners—a significantly lower number than that 50.00% of humanities majors who identified as tactile learners in this study. Overall, all fields of study showed a preference for visual learning except those majoring in the humanities.

Language Background and Learning Styles

Nine language backgrounds were present in the study; Table 6 provides an overview these backgrounds in relationship to the participants' learning styles.

Table 6: Learning Styles by Native Language

<table>
<thead>
<tr>
<th>Native Language</th>
<th>Visual Learners (% of Language Group)</th>
<th>Auditory Learners (% of Language Group)</th>
<th>Tactile Learners (% of Language Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>4 (66.66%)</td>
<td>1 (16.66%)</td>
<td>1 (16.66%)</td>
</tr>
<tr>
<td>Chinese</td>
<td>4 (50.00%)</td>
<td>1 (12.50%)</td>
<td>3 (37.50%)</td>
</tr>
<tr>
<td>French</td>
<td>2 (66.6%)</td>
<td>1 (33.33%)</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>German</td>
<td>1 (100.00%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Hindi</td>
<td>3 (100.00%)</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Korean</td>
<td>2 (66.66%)</td>
<td>1 (33.33%)</td>
<td>0 (0.00%)</td>
</tr>
</tbody>
</table>
Language Background and Visual Learning

Reid (1987) found that the language background with the highest percent of visual learners was Korean. This study does support Reid's findings that the majority of Korean students (66.66%) identify as visual learners; however, Hindi speakers showed the strongest overall preference for visual learning as 100.00% of Hindi speaking participants (n=3) were visual learners. Additionally, 100.00% of German (n=1) and Serbian (n=1) speakers also identified as visual learners but were only represented by one participant making these findings a bit less significant when compared the preferences of Hindi speakers. Arabic, French, Korean, and Spanish speakers were all showed the second strongest preference for visual learning as 66.66% of each language group were visual learners. Finally, 50.00% of Chinese speakers identified as visual learners—a much higher percent than Chinese speaking tactile learners (37.50%) or Chinese speaking auditory learners (12.50%). Vietnamese speakers (n=1) was the only language group where the majority did not identify as visual learners. Rather, the single Vietnamese speaking participant in the study identified as a tactile learner. Still, the major finding in regard to language background and visual learning styles is that the majority of speakers of all languages except Vietnamese were visual learners. More research is needed, however, in regard to each of the language groups represented here by a single participant to paint a more detailed picture of these trends.
Language Background and Auditory Learning

In this study, only 13.70% of the participants identified as auditory learners. In fact, no German, Hindi, Serbian, Spanish, or Vietnamese speakers identified as auditory learners. What's more, Reid's (1987) findings clearly indicate that Arabic and Chinese speakers have a strong preference for auditory learning, but that same finding was not found in this study. Only a single participant from each of the following language backgrounds identified as auditory learners: Arabic, Chinese, French, and Korean. There is some similarity to Reid's findings here; that is, Arabic and Chinese speakers were 2 of the 4 language groups that did have a participant identify as an auditory learner; however, the results differ greatly in that auditory learning was far from the preferred learning style as just 16.66% of Arabic speakers and only 12.50% of Chinese speakers identified as auditory learners.

These results are surprising given the amount of scholarship published on the use of audio in L2 learning environments (see Chapter 1). One hypothesis to explain this phenomenon is that auditory tasks and activities lend themselves particularly well to L2 vocabulary development regardless of one's learning style. Another explanation is that audio does, in fact, work well for vocabulary development; however, video and other visual-based tools may provide an even stronger platform for these types of activities given the learning style results found here. More research is needed to determine if this is the case as studies involving the use of auditory tools in ESL classrooms may be currently overlooking the modality that best fits them today—video—as the results of this study clearly reveal that auditory learners made up the smallest portion of participants.
Language Background and Tactile Learning

Reid's (1987) finding that the vast majority of L2 students identify as tactile learners differ greatly as just 20.60% of the participants identified as tactile learners. No French, Hindi, Korean, or Serbian speakers identified as tactile learners. Only 16.66% of Arabic students, 33.33% of Spanish students, and 37.50% of Chinese speakers identified as tactile learners. The only language group to have a clear preference for tactile learning was Vietnamese speakers, which, again, differs from Reid's (1987) findings that highlight the fact that the group with the strongest preference for tactile learning were Chinese speakers—however, this study's findings do align with Reid's in some regard because Chinese speakers represented in this study did also show the strongest preference for tactile learning out of any other language group, although the majority of Chinese speakers still clearly identified as visual learners. This similarity strongly suggests that while tactile learning activities may not best align with students' learning styles, it does support the argument that tactile learning strategies may be the most useful for Chinese speakers. Continued research on this phenomenon is needed to more fully explore this issue.

Initial Overall Implications of Learning Style Findings

Table 1: Overview of Learning Styles highlights a significant and interesting trend. The overall dominance of visual learning styles is both a surprising and incredibly important finding with significant implications for students, teachers, and administrators. Firstly, excluding Vietnamese speakers, each language group preferred visual learning. This is quite significant given the fact that so little L2 scholarship currently focuses on the use of video feedback for improving students' vocabulary and essay writing skills. Secondly, as Table 7 highlights, this preference for visual learning coexists with the fact that the participants reported receiving visual feedback from their teachers by far the least. On average, participants reported having just .13
Table 7: Participants’ Previous Feedback Experience

<table>
<thead>
<tr>
<th></th>
<th>Visual Feedback</th>
<th>Auditory Feedback</th>
<th>Tactile Handwritten Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of previous classes that used feedback style</td>
<td>0.13</td>
<td>3.44</td>
<td>10.13</td>
</tr>
<tr>
<td>Most classes any 1 participant reported</td>
<td>2</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Fewest classes any 1 participant reported</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>% who have never received feedback style</td>
<td>93.00%</td>
<td>72.41%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

classes in which a teacher provided them with visual feedback\(^5\) (image or video). The most classes any one student participant had in which an instructor provided such feedback was 2 (n=2), and the fewest was 0 (n=27). Only 2 students had previously received visual feedback, while the clear majority (27 of the 29 participants) reported never receiving video feedback from any of their previous teachers. In other words, despite the fact that 65.50% of the study's participants identified as visual learners, 93.00% of these students received video-based feedback for the first time during this study, highlighting a possible mismatch between teaching styles and learning styles in their educations thus far.

A slight increase can be seen in regard the participants' past experience with auditory feedback. The average number of courses participants' had in which a teacher provided them auditory comments was 3.44. The most classes any one student participant had in which an instructor provided such feedback was 10 (n=2), 8 more courses than the most courses than any 1 participant reported receiving visually-based feedback in. Like visual feedback, the majority of participants stated that they have never received auditory feedback in any class. 72.41% of the

\(^5\) Although written commentary includes visual elements, written feedback was not considered visual feedback in this study
students surveyed reported never receiving auditory feedback (n=21). Still, this signals that for the group of L2 students surveyed here, it was 20.59% more likely for them to receive auditory comments than visual comments despite the fact that only 13.70% of the participants in this group of students identified as auditory learners further drawing attention to the mismatch between teaching styles and learning styles in their previous education.

The average number of courses participants had where an instructor provided them with written, tactile comments (paper comments that they can physically hold in their hand) was 10.13, and all participants (100.00%) reported having at least 2 classes in which such feedback was given. The most classes any one student participant had in which an instructor provided written, tactile feedback was 30 (n=2), and the fewest was 2 (n=1). Again, the data signal a mismatch between the participants' learning styles and the teaching styles of their previous instructors. Of the L2 students in this study, just 20.60% were tactile learners—44.90% fewer than those who identified as visual learners. In spite of the fact that this group of L2 learners is comprised predominantly of visual learners, 100.00% of the participants in this study have received tactile feedback while just 7.00% have received video feedback.

As a result of these data, it is safe to put forth the argument that the L2 participants in this study are clearly visual learners who have not been previously exposed to video feedback. It now seems that teachers and administrators may want to consider adopting more visual-based learning activities, creating more visually-based classroom materials (video and image), and weaving visual elements into all phases of teaching including the assessment process. However, as Nim Park and Son (2009) point out, classroom materials dependent on visual technology work well, but only when employed by high-quality teachers. Thus, I am by no means suggesting that a shift from written classroom materials to visually-based materials will improve the classroom
on its own. Visual materials may be more appealing to students, however, when employed in well thought out, meaningful and relevant ways. Poor planning on the part of an instructor in regard to visual materials will undoubtedly end up in frustration for students. More importantly, educators can use this knowledge of clear visual preference in teacher training sessions to better prepare teachers to meet students' needs. This claim can be made due to the fact that the variables mentioned in this chapter (age, gender, field of study, and language background) did not change the participants' overall preference for visual learning.

Additionally, the overall shift in learning style preferences among L2 students is noteworthy in itself. Reid (1987) found that L2 students were predominantly tactile learners, whereas this study's findings clearly suggest the vast majority of L2 students enter the classroom as visual learners. This does not in any way mean that Reid (1987) was wrong about students' needs at the time—rather, this reinforces Xiao's (2006) argument that the learning styles of L2 students have changed due to increased globalization and the increasing amount of communication taking place on social networking sites between people from diverse cultural backgrounds and language groups. This trend should not come as a surprise given the amount of time people regularly spend communicating with one another in online, digital spaces in both their academic and personal lives. As C.L. Selfe (1999) argues, technology has changed the ways in which we think about literacy due to the fact that people are increasingly required to be literate in various types of computer software to engage with others in professional settings and in their personal lives at home. Selfe states that the rise of computer technology has "changed the official criteria for both 'literate' and 'illiterate' individuals" (p. 423). It is not surprising, then, that all 29 participants (100.00%) in this study reported owning their own computer or tablet in the week 1 survey provided to them.
As literacy criteria continue to change, and people spend more and more time communicating in digital spaces with others from all over the world, undergraduate students—regardless of cultural and language backgrounds—will have undoubtedly spent a large portion of their lives behind the computer screen communicating, learning, socializing, and experiencing the world in a visual modality. When viewed in this way, the shift from Reid's (1987) students identifying as tactile learners—in a far less digitally-dependent age that predates the advent of the Internet and relied much more heavily on handwritten texts—to the participants of this study preferring visual learning in a digital age is perhaps expected.

In relation to this shift to the digital age, a final initial implication of the initial learning style inventory survey results relates specifically to the third research question this dissertation works to answer: by providing feedback to students in modalities that both match and do not match their identified learning styles, how do instructors impact student achievement and comfort levels when teaching undergraduate NNS? If hard copy written feedback is still the norm in L2 writing courses, it may no longer be as beneficial for L2 students as it was at the time of Reid's (1987) study. The results of this learning style inventory clearly highlight the fact that much has changed in regard to the ways in which our students learn best—they are first and foremost visual learners.

Regardless of whether globalization or technological advancements have sparked this change, or a combination of both, the change seems to have taken its hold on L2 students studying abroad. Simply handing a paper copy of written comments to a student may no longer best match our students' learning style needs as evident from the outcome of this study. Additionally, despite the plethora of data that covers the rich set of benefits audio feedback has for L2 students, it seems very few students in this study have been previously exposed to
auditory feedback (27.59%), and even fewer still identify as auditory learners (13.70%), throwing into question the overall usefulness of auditory comments in the L2 classroom. More importantly, the results of this learning style inventory clearly and strongly point to the need for, as Hyland and Hyland (2006) suggest, the consideration of alternative, emerging means of providing feedback.

The Week 1 Survey: Participants' Initial Perceptions on Feedback Styles and Connections to Learning Style Inventory Outcomes

While the week 1 survey did ask participants to provide some background information about themselves, the survey's main purpose was to determine how understandable, helpful, and valuable participants thought video, audio, and written comments would be over the course of the semester in an undergraduate L2 writing course. These 3 terms were defined on a handout given to the participants during week 1 of the semester before the surveys were completed. Participants initially had specific trouble understanding the difference in meaning between the terms "helpful" and "valuable," but had little trouble with the word "understandable." The definitions were discussed in class until all participants' questions were answered in regard to the difference between each definition. Those same definitions are provided here:

- **Understandable:** The ability to be understood. The ability to comprehend something in a clear, accessible, user-friendly way. Understandable comments do not confuse.

- **Helpful:** The ability to provide help. Something is helpful if it is useful and supportive of a goal. Helpful comments are not useless or inconvenient.

- **Valuable:** The ability to be very important. One item is more valuable than the next item because of how much of an improvement it is when compared to other
similar items. You typically choose to use something that is more valuable over something that is not as valuable. Your tablet or phone may be more valuable to you than your textbook because it is an improvement over textbooks (you can load hundreds of textbooks on one phone, for example). Valuable comments are not comments that are unimportant or that you wish were given to you differently. Participants were asked to rate how understandable, helpful, and valuable they thought each style of essay feedback would be (video, audio, and written) on a scale of 1 (poor) to 5 (very good) during the upcoming semester.

As seen in Table 8: Overview of Participants' Initial Feedback Modality Preference Predictions, written comments were predicted to be the most understandable, helpful, and valuable by the participants. The average rating for how understandable participants predicted written feedback to be was 4.31, followed by video feedback at 4.06, and audio feedback at 3.51. 37.93% of the participants (n=11) rated the predicted understandability of written feedback a 5, and just 3.44% (n=1) provided a rating of 3 or lower. 9 participants, or 31.03%, rated the predicted understandability of video feedback at 5; however, 10.34 % (n=3) provided a rating of 3 or lower. In regard to audio feedback, just 1 participant, or 3.44%, rated

<table>
<thead>
<tr>
<th>Category</th>
<th>Video Feedback (average rating)</th>
<th>Audio Feedback (average rating)</th>
<th>Written Feedback (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understandable</td>
<td>4.06</td>
<td>3.51</td>
<td>4.31</td>
</tr>
<tr>
<td>Helpful</td>
<td>3.62</td>
<td>3.48</td>
<td>4.51</td>
</tr>
<tr>
<td>Valuable</td>
<td>3.79</td>
<td>3.44</td>
<td>4.55</td>
</tr>
</tbody>
</table>
the predicted understandability a 5. In contrast, however, 27.58% (n=8) provided a rating of 3 or lower.

This order of predicted preference did not change when participants ranked how helpful they thought each modality of feedback would be during the semester. Similarly, participants also ranked the feedback methods in this same order in regard to how valuable they thought each modality would be. The average rating for how helpful participants predicted written feedback to be was 4.51, followed by video feedback at 3.62, and audio feedback at 3.48. Here, too, numerous students (n=15), or 51.72% of the participants, ranked the predicted helpfulness of written feedback a 5, and just 1, or 3.44% of the participants, provided a rating of 3 or lower. 8 participants, or 27.58%, rated the predicted helpfulness of video feedback a 5; however, 31.03% (n=9) provided a rating of 3 or lower. In regard to audio feedback, just 1 participant, or 3.44%, rated the predicted helpfulness a 5. In sharp contrast, however, 27.58% (n=8) provided a rating of 3 or lower further providing evidence of a strong lack of preference for audio feedback.

Once again, the same pattern held true in regard to how valuable the participants thought each feedback modality would be during the semester as the data indicate yet another clear predicted preference for written feedback with an average rating of 4.55, followed by video feedback at 3.79, and then audio feedback at 3.44. 62.06% (n=18), a majority of the participants in the study, rated the predicted value of written feedback a 5, and no participants provided a rating of 3 or lower further highlighting the participants' predicted preference for written comments. 8 participants, or 27.58%, rated the predicted value of video feedback at 5; however, 20.68% (n=6) provided a rating of 3 or lower. In regard to audio feedback, just 1 participant, or 3.44%, rated the predicted value a 5. In contrast, however, 27.58% (n=8) provided a rating of 3 or lower.
The key finding here is that participants clearly predicted that written feedback would be the most beneficial method for them to receive essay feedback from their instructor during the semester. However, these initial results were tested against the numerous variables discussed earlier in the chapter to determine for what groups of individuals, if any, the strong initial belief that written feedback would be the most understandable, helpful, and valuable method of feedback changed to a preference toward video or audio feedback.

*Age and Predicted Feedback Preferences*

To begin such a detailed analysis, Table 9: Participants' Predicted Video Feedback Preferences by Age Group shows how the participants rated and predicted the understandability, helpfulness, and value of video feedback by age group. When analyzed this way, the data demonstrate that the 18-21 age group (n=24) believed that video feedback would be more understandable than any other age group with an average rating of 4.12, while the 17-or-less group (n=1) provided a 4.00 rating, the greater-than-26 group (n=1) provided a rating of 4.00, and Table 9: Participants' Predicted Video Feedback Preferences by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>(n=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-21</td>
<td>4.12</td>
<td>3.62</td>
<td>3.75</td>
</tr>
<tr>
<td>(n=24)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-26</td>
<td>3.66</td>
<td>3.00</td>
<td>3.66</td>
</tr>
<tr>
<td>(n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 26</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>(n=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
and the 22-26 age group (n=3) averaged 3.66. In regard to helpfulness, the participant in the greater-than-26 group rated video feedback a 5.00, the 18-21 group averaged 3.62, the 17-or-less group averaged 4.00, and the 22-26 age group averaged a rating of just 3.00. Following a similar trend as the previous 2 analyses, in regard to the predicted value of video feedback, the greater-than-26 group provided a rating of 5.00, the 17-or-less group had a rating of 4.00, the 18-21 group had an average rating of 3.75, and the lowest average rating was once again provided by the 22-26 age group at 3.66.

Thus far, quite interestingly, the most significant trend present in the data is that the participants in the 22-26 age group (n=3) believed that video feedback would be weaker in understandability, helpfulness, and value than all other groups. While the 17-or-less group and the greater-than-26 age groups only had 1 participant respectively, the other two groups were represented by multiple raters. While both groups, especially the 22-26 age group, are represented by modest numbers, the consistent low ratings are nevertheless significant and may speak to specific cautious feelings this particular age group has toward the proposition of being provided video feedback in the L2 writing classroom.

When the same age groups were analyzed in regard to their perceived feelings toward audio feedback, a similar finding was found; that is, older age groups tended to predict that audio feedback would be less understandable, helpful, and valuable. Table 10: Participants' Predicted Audio Feedback Preferences by Age Group specifically shows how the participants rated and predicted the understandability, helpfulness, and value of audio feedback by age group. The data show that the 17-or-less age group believed that audio feedback would be more understandable than any other age group with an average rating of 4.00, while the 18-21 group averaged 3.58,
the 22-26 group averaged 3.00, and the greater-than-26 group also provided a rating of 3.00. In regard to helpfulness, the participant in the greater-than-26 and the 17-or-less groups had the highest helpfulness rating of 4.00 followed by the 18-21 group at 3.50, and the 22-26 group averaged the lowest rating with a score of just 3.00. When the predicted value of audio feedback was analyzed, the same general pattern held true in that the older age groups rated the value of such feedback lower than younger age groups. Specifically, the 17-or-less group provided a rating of 4.00, the 18-21 group averaged a rating of 3.50, and the lowest rating of 3.00 was provided by both the greater-than-26 and 22-26 age groups.

Overall, the data point to the fact that the 22-26 group either provided the lowest rating or tied in score for the lowest rating across all categories related to the predicted understandability, helpfulness, and value of audio feedback. When combined with the previous finding that they were also the most resistant group to the proposition of receiving video feedback, the conclusion can begin to be made that this particular age group may be more reluctant to embrace video and audio feedback in the L2 writing classroom and may not choose such a feedback method if given

---

**Table 10: Participants' Predicted Audio Feedback Preferences by Age Group**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>(n=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-21</td>
<td>3.58</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>(n=24)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-26</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>(n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 26</td>
<td>3.00</td>
<td>4.00</td>
<td>3.00</td>
</tr>
<tr>
<td>(n=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the option. This finding may be related to Xiao's (2006) claim that globalization and technological developments have changed our students today as younger people are more regularly exposed to messages that feature combinations of video, audio, and written text. The difference in ratings between the 18-21 age group and the 22-26 group alone may begin to reveal specific tiers in regard to what ages are initially more or less receptive to digital feedback techniques when they step foot in the classroom. Further research would be needed to test the findings found in this relatively small sample size.

This hypothesis continues to be supported when analyzed in correlation with the findings in regard to the participants' predicted perceptions on written feedback which prove to be incredibly significant. Table 11 shows how the participants rated and predicted the understandability, helpfulness, and value of written feedback by age group. When analyzed this way, the data indicate that the greater than 26 group believed that written feedback would be more understandable than any other age group with a rating of 5.00, while the 22-26 group averaged a rating of 4.33, the 18-21 group a 4.19, and the 17-or-less group a 4.00. It is clear that a significant switch has occurred here as the 2 older age groups predicted written feedback to be

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18 (n=1)</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>18-21 (n=24)</td>
<td>4.19</td>
<td>4.54</td>
<td>4.41</td>
</tr>
<tr>
<td>22-26 (n=3)</td>
<td>4.33</td>
<td>4.33</td>
<td>4.33</td>
</tr>
<tr>
<td>&gt; 26 (n=1)</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

Table 11: Participants' Predicted Written Feedback Preferences by Age Group
more understandable than the 2 younger groups whereas the opposite was true in regard to both video and audio feedback. In fact, it is important to note that the written feedback ratings are significantly higher overall across all categories when compared to both other modalities of feedback; that is, no rating is under 4.00 for any category showing that participants of all age groups clearly assume that written feedback will, for the most part, be understandable, helpful, and valuable. The greater-than-26 age group rated the predicted helpfulness of written feedback a 5.00, the 18-21 group a 4.54, the 22-26 age group a 4.33, and the 17-or-less group a 4.00. Similarly, in regard to the value of written feedback, the greater-than-26 age group rated the predicted helpfulness of written feedback a 5.00, the 18-21 group a 4.41, the 22-26 age group a 4.33, and the 17-or-less group a 4.00. Generally speaking, the data show that older age groups are less receptive to digital feedback overall than younger age groups.

To fully illustrate each age group's overall predicted preferences, then, Tables 12-15 show each group's overall ratings. It is difficult to discern any patterns in Table 12 due to the fact that there was only 1 participant who predicted equal value among all traits for all feedback modalities. However, Table 13, which explores the age group represented by the largest number of participants, the 18-21 group, 2 distinct findings are present. First, a clear overall preference

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Audio</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Written</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>
for written feedback is present. Secondly, video feedback was rated higher in all 3 categories when compared to audio feedback. What's interesting is that this trend continues across the

**Table 13: Participants' Predicted Feedback Preferences in 18-21 Age Group**

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.12</td>
<td>3.62</td>
<td>3.75</td>
</tr>
<tr>
<td>Audio</td>
<td>3.58</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Written</td>
<td>4.19</td>
<td>4.54</td>
<td>4.41</td>
</tr>
</tbody>
</table>

remaining 2 age groups as well. Table 14 highlights this fact as once again a clear preference for written feedback is present among the 22-26 age group, and here, too, video feedback was predicted to be the second-best option after written feedback. Table 15 reveals that this pattern is also true for the greater-than-26 age group participant.

**Table 14: Participants' Predicted Feedback Preferences in 22-26 Age Group**

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>3.66</td>
<td>3.00</td>
<td>3.66</td>
</tr>
<tr>
<td>Audio</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Written</td>
<td>4.33</td>
<td>4.33</td>
<td>4.33</td>
</tr>
</tbody>
</table>

**Table 15: Participants' Predicted Feedback Preferences in > 26 Age Group**

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Audio</td>
<td>3.00</td>
<td>4.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Written</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>
Overall, when the data are analyzed in relation to age, the students' preference for written feedback remains across all age groups, and participants whose age was greater than 22 predicted that written feedback would be significantly more understandable than digital feedback. In sum, it can be concluded that age had a small impact on the predicted preference for written feedback but does highlight the fact that older participants tended to be more resistant to audio and video feedback overall.

**Gender and Predicted Feedback Preferences**

Another area worthy of exploration is how one's gender may have impacted the participants' predicted feedback preferences in this study. Table 16 highlights how the participants rated and predicted the understandability, helpfulness, and value of video feedback by gender. When analyzed this way, the data indicate that females predicted that video feedback would be slightly more beneficial than males across all 3 categories. To be specific, females rated the predicted understandability of video feedback a 4.14, and men rated it a 4.00. Similarly, females rated the predicted helpfulness of video feedback a 3.85 whereas men rated it a 3.40. The predicted value of video feedback was rated a 4.00 by female participants, and males rated it a 3.60. These initial findings in regard to gender show that females may be more receptive to the proposition of receiving video feedback from their L2 writing teachers.

**Table 16: Participants' Predicted Video Feedback Preferences by Gender**

<table>
<thead>
<tr>
<th>Gender (n)</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (n=14)</td>
<td>4.14</td>
<td>3.85</td>
<td>4.00</td>
</tr>
<tr>
<td>Male (n=15)</td>
<td>4.00</td>
<td>3.40</td>
<td>3.60</td>
</tr>
</tbody>
</table>
When the issue of gender was analyzed in regard to participants' perceived feelings toward audio feedback, a similar finding was found; that is, females predicted that audio feedback would be more understandable, helpful, and valuable than males. Table 17: Participants' Predicted Audio Feedback Preferences by Gender specifically shows how the participants rated and predicted the understandability, helpfulness, and value of audio feedback by gender. The data show that females rated the predicted understandability of audio feedback a 3.78 while males rated it a 3.26. In regard to the predicted helpfulness of audio feedback, females rated it a 3.85, and men rated it just a 3.13. When the predicted value of audio feedback was analyzed, females rated it a 3.85 versus a 3.06 average rating from male participants.

In regard to the two digital modalities (video and audio), it is clear that females predicted digital feedback to be more understandable, helpful, and valuable than males. In fact, females' average rating across all categories for both video and audio feedback was 3.91 whereas the average rating across all categories for males was just 3.40. Therefore, males may be more reluctant than females to embrace video and audio feedback in the L2 writing classroom and may not initially choose such a feedback method if given the option.

The relationship between gender and predicted feedback preferences becomes quite clear after analyzing the participants' predicted perceptions on written feedback. Table 18 highlights

<table>
<thead>
<tr>
<th>Gender</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (n=14)</td>
<td>3.78</td>
<td>3.85</td>
<td>3.85</td>
</tr>
<tr>
<td>Male (n=15)</td>
<td>3.26</td>
<td>3.13</td>
<td>3.06</td>
</tr>
</tbody>
</table>
how males, not females, show a strong preference for handwritten comments across all
categories; that is, male participants rated the understandability, helpfulness, and value of written
feedback higher than females. Specifically, males rated the predicted understandability of written
feedback to be a 4.40 whereas females rated it a bit lower at 4.21. Additionally, the predicted

Table 18: Participants' Predicted Written Feedback Preferences by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>4.21</td>
<td>3.92</td>
<td>4.42</td>
</tr>
<tr>
<td>(n=14)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4.40</td>
<td>4.66</td>
<td>4.46</td>
</tr>
<tr>
<td>(n=15)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

helpfulness was rated a 4.66 by male participants and only a 3.92 by female participants. Finally,
the predicted value of written comments was rated a 4.46 by males and a 4.42 by females.

To fully illustrate each gender's overall predicted preferences, then, Table 19 shows
female participants' overall preferences, and Table 20 shows the overall ratings provided by male
participants. As can be seen in Table 19, despite having a stronger predicted preference than
males for both video and audio feedback, females still predicted that written feedback would be
the overall most useful form of feedback during the semester. Overall, female participants'

Table 19: Participants' Predicted Feedback Preferences for Females

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.14</td>
<td>3.85</td>
<td>4.00</td>
</tr>
<tr>
<td>Audio</td>
<td>3.78</td>
<td>3.85</td>
<td>3.85</td>
</tr>
<tr>
<td>Written</td>
<td>4.21</td>
<td>3.92</td>
<td>4.42</td>
</tr>
</tbody>
</table>
average ratings for video feedback (3.99) and audio feedback (3.82) were still lower than their average rating for written feedback (4.18). Thus, females' predicted preference was written feedback. Males, as seen in Table 20, had a much stronger predicted preference than females for written comments with an average rating of 4.50. Their overall average ratings for video feedback (3.60) and audio feedback (3.15) were significantly lower.

**Table 20: Participants' Predicted Feedback Preferences for Males**

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.00</td>
<td>3.40</td>
<td>3.60</td>
</tr>
<tr>
<td>Audio</td>
<td>3.26</td>
<td>3.13</td>
<td>3.06</td>
</tr>
<tr>
<td>Written</td>
<td>4.40</td>
<td>4.66</td>
<td>4.46</td>
</tr>
</tbody>
</table>

Overall, when the data are analyzed in relation to gender, 3 significant findings emerged. First, the participants' responses clearly identify that females were more receptive overall to initially receiving digital feedback, both video and audio comments, than males at the beginning of the semester. The second major finding in this analysis is that males show a much stronger initial predicted preference toward receiving written comments at the beginning of the semester than females. Still, by analyzing the data through a gendered lens, the third key finding is that participants' overall preference for written feedback remains across both genders.

These 3 findings are paramount when we include the participants' learning styles as part of the discussion. Remember, as outlined earlier in this chapter, despite the majority of both females and males identifying as visual learners, females identified more strongly as visual learners than men by a difference of 11.42%, and also identified more strongly as auditory learners than men by a much smaller difference of 0.95%. Males, however, identified more
strongly than females as tactile learners by a difference of 12.38%. Even though, regardless of gender, there were more visual learners than both tactile and auditory learners, one's learning style does seem to impact one's preferences in regard to the remaining 2 options when gender is considered. Females in the study, who were made up of a higher number of visual and auditory learners than men, preferred video and audio feedback more strongly than males. Conversely, men, who were made up of a higher number of tactile learners than females, predicted preferring written feedback more strongly than females. Thus, it can be said that for both females and males, there seems to be a connection between the participants' learning styles and their predicted feedback preferences.

*Field of Study and Predicted Feedback Preferences*

It is possible that one's field of study may be a determiner in discerning which feedback modality an L2 student may initially prefer at the beginning of the semester; thus, this variable was also closely analyzed. Table 21: Participants' Predicted Video Feedback Preferences by Field of Study indicates how the participants rated and predicted the understandability, helpfulness, and value of video feedback by field of study. When analyzed through this lens, the data did point to 1 significant finding; that is, participants majoring in the Humanities had the lowest average rating for predicted understandability (3.50) and helpfulness (3.00) in regard to video feedback; however, they did predict the value of video comments to be quite high with a rating of 4.33. Earlier in the chapter, the data also showed that all fields of study showed a preference for visual learning except those majoring in the humanities. These two findings align in that humanities majors seem to be less likely to be visual learners, and may be less receptive to the notion of receiving video comments at the onset of the semester. Additionally, though the group was represented by only 1 participant, those majoring in medicine rated the predicted
understandability of video comments higher than all other majors (5.00), and humanities majors provided the lowest rating (3.50). Similarly, medicine majors rated the predicted helpfulness of video feedback the highest (4.00), while humanities majors once again provided the lowest average rating (3.00). Though medicine majors were represented by only a single participant, these findings suggest that those majoring in medicine may find video feedback particularly helpful and easy to understand given the ratings found in this study.

In regard to value, however, the trend breaks in a most interesting way. Humanities majors provided the highest average rating (4.33), while Business majors provided the lowest average rating (3.33). So, while humanities majors predicted that they would struggle understanding video feedback and find the modality less helpful than all other fields of study

Table 21: Participants’ Predicted Video Feedback Preferences by Field of Study

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>3.75</td>
<td>3.75</td>
<td>3.33</td>
</tr>
<tr>
<td>(n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science &amp;</td>
<td>4.33</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Engineering (n=6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard Sciences</td>
<td>4.66</td>
<td>3.66</td>
<td>4.00</td>
</tr>
<tr>
<td>(n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3.50</td>
<td>3.00</td>
<td>4.33</td>
</tr>
<tr>
<td>(n=6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td>5.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>(n=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
surveyed, they still seemed to acknowledge the value of such feedback at the beginning of the semester.

When the participants' fields of study were analyzed in regard to their perceived feelings toward audio feedback, a similar finding was present in that one particular field showed a strong initial resistance to the audio modality. As Table 22: Participants' Predicted Audio Feedback Preferences by Field of Study outlines, Business majors provided the lowest rating for predicted understandability (1.66), helpfulness (1.66), and value (1.66) by a significant amount. This is somewhat surprising given Business majors' fairly average response to the idea of receiving

**Table 22: Participants' Predicted Audio Feedback Preferences by Field of Study**

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>1.66</td>
<td>1.66</td>
<td>1.66</td>
</tr>
<tr>
<td>(n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science &amp; Engineering</td>
<td>3.66</td>
<td>3.33</td>
<td>3.33</td>
</tr>
<tr>
<td>(n=6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard Sciences</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>(n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>4.00</td>
<td>4.16</td>
<td>4.00</td>
</tr>
<tr>
<td>(n=6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>
digital feedback in the form of video. Given this strong reaction, it is quite possible that Business majors in L2 writing courses are particularly resistant to the proposition of receiving audio feedback at the beginning of the semester as they did not find it to be useful in any way.

More interesting, perhaps, is the fact that Humanities majors had the most positive response to the idea of receiving audio feedback and either tied for the highest rating or provided the highest rating in all categories. Specifically, Humanities majors rated the understandability of audio feedback a 4.00, the helpfulness of audio feedback a 4.16, and the value of audio feedback a 4.00; therefore, there is a significant switch present in the data in that Humanities majors reacted the most strongly against video feedback but the most strongly in favor of audio feedback out of all fields of study represented.

This discussion becomes even more interesting when initial written feedback preferences are analyzed. As seen in Table 23: Predicted Written Feedback Preferences by Field of Study, Humanities majors predicted that written feedback would be more understandable, helpful, and valuable than all other majors. Specifically, they rated the understandability a 4.83, helpfulness

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>4.00</td>
<td>4.66</td>
<td>4.66</td>
</tr>
<tr>
<td>(n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science &amp; Technology</td>
<td>4.16</td>
<td>4.50</td>
<td>4.50</td>
</tr>
</tbody>
</table>
Engineering
(n=6)

Hard Sciences
(n=3)

Humanities
(n=6)

Medicine
(n=1)

Undecided
(n=10)

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>3.75</td>
<td>3.75</td>
<td>3.33</td>
</tr>
<tr>
<td>Audio</td>
<td>1.66</td>
<td>1.66</td>
<td>1.66</td>
</tr>
</tbody>
</table>

a 4.83, and the value a 4.83. Additionally, it is noteworthy that the 1 participant in medicine predicted that written feedback would be very difficult to understand, unhelpful, and of little value rating all three categories a 2.00. This is especially interesting considering their extremely positive reactions to the possibility of receiving video and audio feedback during the semester as outlined earlier.

Due to the fact that the analysis of fields of study generated such interesting trends, Tables 24-29 highlight each field of study's overall ratings. Table 24: Business Majors' Predicted Feedback Preferences, which explores the ratings provided by Business majors, 2 distinct

Table 24: Business Majors' Predicted Feedback Preferences
findings are present. First, a clear overall preference for written feedback is present. Secondly, the average ratings for video feedback were significantly higher in all 3 categories when compared to audio feedback. What's interesting is that this trend continues across the majority of fields of study. Table 25: Computer Science & Engineering Majors' Predicted Feedback Preferences highlights this fact as once again a clear overall preference for written feedback is present among Computer Science and Engineering majors, and here, too, video feedback was predicted to be the second-best option after written feedback. Table 26: Hard Sciences Majors' Predicted Feedback Preferences shows that this pattern is also true for those majoring in the Hard Sciences. This group, like the others, preferred written feedback overall, and although the

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.33</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Audio</td>
<td>3.66</td>
<td>3.33</td>
<td>3.33</td>
</tr>
<tr>
<td>Written</td>
<td>4.16</td>
<td>4.50</td>
<td>4.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.66</td>
<td>3.66</td>
<td>4.00</td>
</tr>
<tr>
<td>Audio</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Written</td>
<td>4.33</td>
<td>4.33</td>
<td>4.66</td>
</tr>
</tbody>
</table>
difference in average ratings for video (4.10) and audio (4.00) is quite small, a slight preference for video feedback as a second-best option is present. Humanities majors are 1 of 2 groups that break the trend of preferring written feedback first, video feedback second, and audio feedback last. Table 27: Humanities Majors' Predicted Feedback Preferences highlights the fact that, for Humanities majors, written feedback was still preferred; however, the group's average rating

\[\text{Table 27: Humanities Majors' Predicted Feedback Preferences}\]

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>3.50</td>
<td>3.00</td>
<td>4.33</td>
</tr>
<tr>
<td>Audio</td>
<td>4.00</td>
<td>4.16</td>
<td>4.00</td>
</tr>
<tr>
<td>Written</td>
<td>4.83</td>
<td>4.83</td>
<td>4.83</td>
</tr>
</tbody>
</table>

for audio feedback (4.05) was higher than its average rating for video feedback (3.60). Additionally, no other field of study showed such strong confidence in written feedback as Humanities majors, as Humanities majors average rating for all three categories (4.83) was the highest across all fields of study. The second major to break from the trend of preferring written feedback the most, video feedback second-best, and audio feedback the least was the single participant representing students majoring in Medicine. Although it is difficult to discern any definitive conclusions in Table 28: Medicine Majors Predicted Feedback Preferences due to the fact that there was only 1 participant, the participant's responses did provide an interesting

\[\text{Table 28: Medicine Majors Predicted Feedback Preferences}\]

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>5.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Audio</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>
contrast to the majority of respondents. The participant predicted that written feedback would be quite poor overall with an average rating of 2.00 across all three categories while rating video feedback the highest overall with an average rating of 4.33. Given the fact there was only 1 participant representing this group, more research is needed to determine if this trend would continue over a larger sample size. Finally, although students whose majors are undecided can have a wide variety of interests, Table 29: Undecided Majors' Predicted Feedback Preferences shows that the trend of preferring written feedback, then video, then audio continued here as well. Undecided majors provided an average rating of 4.50 for written feedback, an average rating of 3.86 for video feedback, and an average rating of 3.60 for audio feedback.

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.20</td>
<td>3.60</td>
<td>3.80</td>
</tr>
<tr>
<td>Audio</td>
<td>3.50</td>
<td>3.50</td>
<td>3.80</td>
</tr>
<tr>
<td>Written</td>
<td>4.40</td>
<td>4.50</td>
<td>4.60</td>
</tr>
</tbody>
</table>

Overall, when the data are analyzed in relation to one's field of study, the students surveyed preference for written feedback remains across the majority of fields. The most significant findings here are (1) Medicine majors may react negatively to written feedback and actually prefer video feedback at the beginning of the semester, and (2) Humanities majors may
react negatively to the proposition of receiving video feedback but are the most confident in written feedback.

*Language Background and Predicted Feedback Preferences*

The final variable analyzed was language background. Table 30: Participants' Predicted Video Feedback Preferences by Language Background reveals how the participants rated and predicted the understandability, helpfulness, and value of video feedback in relation to their L1.

*Table 30: Participants' Predicted Video Feedback Preferences by Language Background*

<table>
<thead>
<tr>
<th>First Language</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic (n=6)</td>
<td>4.16</td>
<td>3.66</td>
<td>3.83</td>
</tr>
<tr>
<td>Chinese (n=8)</td>
<td>4.00</td>
<td>3.12</td>
<td>3.12</td>
</tr>
<tr>
<td>French (n=3)</td>
<td>4.33</td>
<td>3.33</td>
<td>4.00</td>
</tr>
<tr>
<td>German (n=1)</td>
<td>4.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Hindi (n=3)</td>
<td>4.33</td>
<td>4.00</td>
<td>4.33</td>
</tr>
<tr>
<td>Korean (n=3)</td>
<td>4.00</td>
<td>3.66</td>
<td>4.33</td>
</tr>
<tr>
<td>Serbian (n=1)</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Spanish (n=3)</td>
<td>4.33</td>
<td>4.33</td>
<td>4.33</td>
</tr>
<tr>
<td>Vietnamese (n=1)</td>
<td>5.00</td>
<td>5.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>
When analyzed in this manner, the data indicate generally similar ratings for most language backgrounds. The single Serbian and Vietnamese speaking participants rated the predicted understandability of video feedback a 5, and all other language groups averaged a score over 4. Once again the Serbian and Vietnamese participants rated the predicted helpfulness of video feedback a 5, but only Spanish speakers (4.33) and Hindi speakers (4.00) averaged ratings above 4. Arabic (3.66), Chinese (3.12), French (3.33), and Korean speakers (3.66) all averaged a score below 3, and the single German speaking participant rated the helpfulness only a 2. Here we can see that several language groups, while stating that they would be able to understand video feedback, predicted that it would not be overly helpful. The same was true to a slightly lesser degree in regard to the predicted value of video feedback. The single Serbian participant once again showed strong confidence in the usefulness of video feedback and rated the predicted value a 5. French (4.00), Hindi (4.33), Korean (4.33), and Spanish speakers (4.33) all averaged a rating over 4; however, Arabic (3.83), Chinese (3.12), speakers all provided a rating under 4 and the single German participant provided a rating of only 2.00. In sum, the suggests that while Hindi, Serbian, and Vietnamese speakers all show particularly strong confidence in video feedback at the onset of the semester, Arabic, Chinese, and German speaking participants showed far less enthusiasm toward its use in class.

When the same language groups were analyzed in regard to their initial feelings toward audio feedback, a much different trend presented itself; that is, several language groups that showed they were quite receptive to video feedback rated audio feedback much lower. As Table 31: Participants' Predicted Audio Feedback Preferences by Language Background shows, only 3 out of the 9 language groups rated the predicted understandability of audio feedback above a 4.00 whereas all 9 rated the predicted understandability of video above a 4.00. Specifically, the
Table 31: Participants' Predicted Audio Feedback Preferences by Language Background

<table>
<thead>
<tr>
<th>First Language</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic (n=6)</td>
<td>3.33</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Chinese (n=8)</td>
<td>3.75</td>
<td>3.37</td>
<td>3.37</td>
</tr>
<tr>
<td>French (n=3)</td>
<td>4.33</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>German (n=1)</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Hindi (n=3)</td>
<td>2.66</td>
<td>2.66</td>
<td>2.00</td>
</tr>
<tr>
<td>Korean (n=3)</td>
<td>2.66</td>
<td>2.66</td>
<td>3.33</td>
</tr>
<tr>
<td>Serbian (n=1)</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Spanish (n=3)</td>
<td>3.66</td>
<td>3.66</td>
<td>3.66</td>
</tr>
<tr>
<td>Vietnamese (n=1)</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>

3 groups to rate it above 4 were French (4.33), German (4.00), and Vietnamese (4.00) speakers. Arabic (3.33), Chinese (3.75), and Spanish speakers (3.66) all rated understandability below a 4,
and Hindi (2.66) as well as Korean speakers (2.66) average a score below 3. This is a significant shift for participants in the Hindi and Korean language groups who rated the understandability of video feedback above a 4. In regard to the predicted helpfulness of audio feedback, French (4.00), German (4.00), Serbian (4.00), and Vietnamese speakers (4.00) average a score of 4 or higher, Arabic (3.50), Chinese (3.37), and Spanish participants (3.66) average a score of 3 or higher. Hindi (2.66) and Korean (2.66) speakers, on the other hand, average a score under 3.

Similar to the findings in regard to understandability, Hindi and Korean speakers felt that audio feedback would be the least helpful. Similar findings held true for the ranked predicted value of audio feedback. Once again, Hindi (2.00) and Korean (3.33) speakers provided the lowest average ratings. French (4.00), German (4.00), Serbian (4.00), and Vietnamese (4.00) speakers all provided an average rating of 4, and Arabic (3.50), Chinese (3.37), Korean (3.33), and Spanish (3.66) speakers all provided ratings of 3 or higher. Hindi speakers were the only language group to provide an overall average rating under 3.00. Of note is that Hindi and Korean speakers showed clear skepticism in regard to the overall usefulness of audio feedback.

Only a single large trend was present when the understandability, helpfulness, and value of written feedback was analyzed by language group, which is that all language groups value written feedback highly. Table 32: Participants' Predicted Written Feedback Preferences by Language Group indicates how the participants rated and predicted the understandability, helpfulness, and value of written feedback by age group. Specifically, the single German speaking participant believed that written feedback would be more understandable than any other

<table>
<thead>
<tr>
<th>First Language</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>4.00</td>
<td>4.00</td>
<td>4.16</td>
</tr>
</tbody>
</table>
age group with a rating of 5.00, while French speakers averaged the next highest score with a rating of 4.66. Chinese speakers averaged a 4.62, Spanish speakers a 4.33, and Arabic, Hindi, Korean, Serbian and Vietnamese speakers all averaged a 4.00. In regard to the predicted helpfulness of written feedback, French, Hindi and Spanish speakers provided an average rating of 5.00, and Chinese (4.75), Korean (4.33), Arabic (4.00), German (4.00), Serbian (4.00), and

<table>
<thead>
<tr>
<th>Language</th>
<th>Mean</th>
<th>Predicted Helpfulness</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>4.62</td>
<td>4.75</td>
<td>4.62</td>
</tr>
<tr>
<td>French</td>
<td>4.66</td>
<td>5.00</td>
<td>4.00</td>
</tr>
<tr>
<td>German</td>
<td>5.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Hindi</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Korean</td>
<td>4.00</td>
<td>4.33</td>
<td>4.33</td>
</tr>
<tr>
<td>Serbian</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Spanish</td>
<td>4.33</td>
<td>5.00</td>
<td>4.66</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>
Vietnamese speakers (4.00) all averaged a score of 4 or higher. Finally, the average score for the predicted value of written feedback was rated the highest by the single Serbian participant (5.00) as well as Hindi speakers (5.00), and Spanish (4.66), Chinese (4.62), Korean (4.33), Arabic (4.16), French (4.00), German (4.00), and Vietnamese speakers (4.00) all average a score of 4 or higher. It is clear that a significant change in thought among the participants has occurred here as all average ratings for all language groups across all three categories are above 4.00 in regard to written feedback. This is a substantial difference when compared with the other two modalities the participants responded to. In the week 1 survey, participants provided 15 average ratings under 4.00 when asked about audio feedback, 8 average ratings under 4.00 when asked about video feedback, and 0 average ratings under 4.00 when asked about written feedback. This means that regardless of their predictions in regard to video and audio feedback, the vast majority of student participants did predict that written feedback would be quite useful.

This strong predicted preference for written feedback is illustrated even more clearly when each language group's overall predicted preferences are isolated for analysis. Tables 33-41 show each group's overall ratings. Table 33: Arabic-Speaking Participants' Predicted Feedback Preferences shows that even though Arabic speakers predicted that video feedback would be

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.16</td>
<td>3.66</td>
<td>3.83</td>
</tr>
<tr>
<td>Audio</td>
<td>3.33</td>
<td>3.50</td>
<td>3.33</td>
</tr>
<tr>
<td>Written</td>
<td>4.00</td>
<td>4.00</td>
<td>4.16</td>
</tr>
</tbody>
</table>
slightly more understandable than written feedback, the overall preference of Arabic speakers in this study was still clearly written feedback with an average score across all categories of 4.05. Video feedback, with an average score of 3.88, was the second modality preferred, and audio, with an average score of 3.38, was the least preferred method.

Chinese speakers also strongly preferred over the other modalities as seen in Table 34: Chinese-Speaking Participants' Predicted Feedback Preferences. Chinese speakers, however, preferred audio over video feedback as a second-best option, although the participants' average overall score for audio feedback (3.49) was only marginally higher than video feedback (3.41). Still, the results of this study signal that Chinese speakers may be more receptive to receiving audio feedback at the beginning of the semester than speakers of other languages.

French speakers, as seen in Table 35: French-Speaking Participants' Predicted Feedback Preferences also predicted that written feedback would be the most useful modality for feedback overall. Like Chinese speakers, French speaking participants' average score for audio feedback (4.11) was higher than that of video feedback (3.88); however, they reacted a bit more positively

### Table 34: Chinese-Speaking Participants' Predicted Feedback Preferences

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.00</td>
<td>3.12</td>
<td>3.12</td>
</tr>
<tr>
<td>Audio</td>
<td>3.75</td>
<td>3.37</td>
<td>3.37</td>
</tr>
<tr>
<td>Written</td>
<td>4.62</td>
<td>4.75</td>
<td>4.62</td>
</tr>
</tbody>
</table>

### Table 35: French-Speaking Participants' Predicted Feedback Preferences

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.33</td>
<td>3.33</td>
<td>4.00</td>
</tr>
</tbody>
</table>
to audio feedback than Chinese speakers. This may point to the fact that French speakers may be even more receptive to audio feedback than Chinese speakers at the onset of the semester in L2 writing courses.

Although there was only 1 German speaking participant in the study, the participant also showed a predicted preference for written feedback. Here again, as seen in Table 36: German-Speaking Participants' Predicted Feedback Preferences, the participant's average score for audio feedback (4.00) was higher than the participant's average score for video feedback (2.66); however, in this case, the difference in average ratings is much more significant. Since the German language group was only represented by a single participant, further research is needed to determine whether such trends found here would continue if tested across a larger sample size.

Hindi speakers' preferences were more similar to Arabic speakers in that they preferred written feedback first and foremost and preferred video, not audio, second-best. Although they share the same general overall opinions, there is much wider margin here as shown in Table 37: Hindi-Speaking Participants' Predicted Feedback Preferences. The overall average rating given

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Audio</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Written</td>
<td>5.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>
Table 37: Hindi-Speaking Participants’ Predicted Feedback Preferences

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.33</td>
<td>4.00</td>
<td>4.33</td>
</tr>
<tr>
<td>Audio</td>
<td>2.66</td>
<td>2.66</td>
<td>2.00</td>
</tr>
<tr>
<td>Written</td>
<td>4.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

by Hindi speakers in regard to all three categories for written feedback was 4.66, and the overall average rating for video was only slightly lower at 4.22. The average rating for audio feedback was much lower. Hindi speakers gave audio feedback an average overall rating of just 2.44—a rating that is 1.78 rating points lower than video and 2.22 points lower than written feedback's overall marks. These large jumps in averages demonstrate that Hindi speakers viewed written feedback and video feedback in a similarly positive light, while at the same time reacted strongly against audio feedback. No other language group scored audio feedback as low as Hindi speakers. Again, due to the modest size of the study, further research is needed before conclusions can be definitively drawn about the connection between Hindi speakers and audio feedback on writing assignments, but this study seems to suggest that Hindi speakers have little confidence in the merits of audio feedback at the onset of the semester.

Like every other language group mentioned thus far, Korean speakers also showed a predicted preference for written feedback and, like Arabic and Hindi speakers, preferred video feedback second. Table 38: Korean-Speaking Participants' Predicted Feedback Preferences highlights a rather large difference between the average score for audio feedback across all

Table 38: Korean-Speaking Participants’ Predicted Feedback Preferences

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
</table>
categories (2.88) and that of video feedback (3.99) as well as written feedback (4.22).

Despite there being only 1 Serbian participant, they did provide an interesting alternative to the dominant narrative presented thus far shown in Table 39: Serbian-Speaking Participants
Predicted Feedback Preferences. This participant provided the highest overall average to video feedback (5.00) followed by written feedback (4.33) and audio feedback (4.00). Since Serbian

Table 39: Serbian-Speaking Participants' Predicted Feedback Preferences

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Audio</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Written</td>
<td>4.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

speaking participants were only represented by a single participant in this modest study, further research is needed to determine whether such trends found here would continue if tested across a larger sample size.

The three Spanish speaking participants in the study provided ratings that aligned with the majority of the language groups as seen in Table 40: Spanish-Speaking Participants' Predicted Feedback Preferences. Spanish speakers predicted that written feedback would be

Table 40: Spanish-Speaking Participants’ Predicted Feedback Preferences

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Understandable (average rating)</th>
<th>Helpful (average rating)</th>
<th>Valuable (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>4.33</td>
<td>4.33</td>
<td>4.33</td>
</tr>
</tbody>
</table>
the most helpful with an average rating of 4.66. They provided an average overall rating of 4.33 for video comments and a 3.66 average to audio comments.

The single Vietnamese speaking participant in the study, like the Serbian participant, showed an overall preference for video comments at the start of the semester, which is outlined in Table 41: Vietnamese-Speaking Participants' Predicted Feedback Preferences. The participant provided an average overall rating for video comments of 4.66, and a rating of 4.00 for both audio and written comments. Again, it is hard to discern too much from the language groups represented by only a single participant, but it does raise questions about whether this trend would continue in a larger sample size.

Overall, when the data is analyzed in relation to language background, what was found was that the preference for written feedback remains across nearly all language groups. The most significant findings here are (1) Serbian and Vietnamese speakers may actually prefer video comments to written comments at the start of the semester, (2) Arabic, German, Hindi, Korean, and Spanish speakers all preferred video over audio as a second-best option at the start of the
semester, while Chinese and French speakers preferred audio second-best, and (3) Hindi speakers reacted the most strongly against audio feedback than any other language group. These three key findings may point to certain language backgrounds will be more or less receptive to different feedback modalities than others given their cultural differences.

Participant Rationales for Week 1 Survey Responses

To sum up the key findings thus far, the data thus far suggest that (1) the participants in the study are visual learners, (2) the participants report predicting that written feedback will best assist them in a L2 undergraduate writing course, (3) older participants feel written comments will be more understandable than younger participants, (4) gender played no role in feedback preference, (5) Humanities majors may be the most resistant field of study to receiving digital modalities of feedback, (6) Medicine majors may be the most receptive field of study to receiving video comments, (6) the majority of language groups preferred written feedback over other modalities, and (7) Hindi speakers may be the most resistant to audio feedback at the onset of the semester. Although the data presented thus far paint a clear picture of identifiable trends, the participants’ voices provide further triangulation of these findings.

Participants were asked to state which feedback style they would prefer during the semester and write brief explanations about their choice at the end of the Week 1 survey, which help paint a more complete picture of why, despite the group identifying predominantly as visual learners, they articulated the point that written comments would be the most understandable, helpful, and valuable type of feedback during the semester. Each participant circled the style of feedback they would prefer and wrote at least 3 sentences explaining their thoughts and perceptions in regard to how they ranked their predicted preferences for each modality as they relate to usefulness, helpfulness, and value.
As Table 42: Participants' Week 1 Feedback Choice shows, 82.75% of the participants stated that they would choose to have written feedback during week 1 of the semester. Just 17.24% chose video comments, and not a single participant chose audio comments. Students'

Table 42: Participants' Week 1 Feedback Choice

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Number of Participants (Percent of Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>5 (17.24%)</td>
</tr>
<tr>
<td>Audio</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Written</td>
<td>24 (82.75%)</td>
</tr>
</tbody>
</table>

written responses helped paint a clearer picture as to why these selections were made.

The participants' responses were analyzed and coded into general categories. Only 3 categories of response were found in the participants' week 1 responses. The most common response, which occurred in 68.96% of the responses, was that written feedback was preferred due to the fact that it is all they have previously been exposed to. For example, one student wrote, "I have not experienced [digital] feedback. New things make me nervous." Another wrote that they are "used to [written feedback]. Audio and video is strange." Some even requested not to have digital feedback in their responses. For instance, one student responded by saying, "I want written feedback. I am used to it. Audio feedback I have never had, so I don't want [it]."

These types of responses clearly demonstrate that the participants had clear and significant apprehensions about working in a feedback style they were not familiar with simply due to lack of experience with the modalities.
The second category, which was present in 20.68% of the responses, were focused specifically on the fact that listening to audio and watching video would be more difficult than reading handwritten comments in English. A student wrote that "audio will be so fast! It cannot be accurate." A different student wrote, "I learn by reading, never by listening." Another wrote that "listening to anyone in English is so hard. Please I do not want audio feedback." Still another student wrote that "Audio will have listening problems. Teachers speak too fast for me to understand anyway." Responses like these illustrate that a number of participants have experienced teachers that speak too quickly in the classroom, and because of this fact, they came to the classroom with a fear of working with audio materials. These responses also show that numerous participants entered the classroom with the belief that listening is significantly harder than reading. Another possible interpretation these participant comments is that there is a preference for reading due to the fact that it is more self-paced and controllable than the audio or video feedback.

What's interesting is that the third category of participant responses demonstrates a strong interest in digital feedback. 10.36% of the responses plainly stated a preference for the digital. Students wrote comments such as "video and audio will be the most helpful," and "video and audio will be better because hearing and seeing explanations is much better." And while numerous participants voiced concern about the difficulty of listening, one participant stated that video and audio could help them with their weaknesses in English. The student wrote, "I really struggle listening in English. I think video and audio will help me improve my language levels." Although small in number, these responses do indicate that a small number of students do immediately prefer receiving audio or video comments for various reasons.
Final Reflections on the Week 1 Survey

The week 1 survey lead to a plethora of important findings. First, the results presented here provide a voice for L2 students entering L2 writing courses in regard to how they initially feel about feedback. It is clear that the majority of participants predicted that written feedback would be the best modality overall. The next most preferred modality was viewed to be video feedback, and finally audio comments.

Secondly, the vast majority of written explanations as to why written feedback was predicted by the student participants to be the most understandable, helpful, and valuable form of feedback pointed to the fact that this was what they have been exposed to in the past, making the form of feedback the most comfortable and easy to use. This finding is paramount in that the data suggest that instructors are consistently creating an expected reality for students. As students continually receive education in a similar way, alternative options become "othered," something that is met with resistance and whose viability becomes immediately questioned for little reason other than the fact that it is different. One can see this fact outlined clearly in the results of this survey as 68.96% of the participants preferred written feedback for no other reason than it was what they have received in the past. Only 20.68% of the responses clearly outlined a specific reason as to why they thought audio or video feedback may provide fewer affordances to them over the course of the semester. In fact, this preference for written feedback did not change in a profound way when analyzed through various diverse lenses; that is, the majority of students predicted written feedback would be the most helpful regardless of gender, age, field of study, and L1 other than the few outliers mentioned earlier in this chapter.

Finally, and perhaps even most importantly, these predictions occurred alongside the participants' clear preference for visual learning (65.50% of the participants in the study
identified as visual learners). One possible explanation is perhaps alphabetic written commentary is visual in ways we don't typically consider; however, a stronger argument based on the data seem to be that the average ratings outlined here indicate that the participants regularly placed the most emphasis on what they have experienced previously when contemplating which feedback modality would be of the most use, not which modality may have the most visual elements or best align with their learning styles. In other words, the data show somewhat of an initial disconnect in the data between the participants' being visual learners but preferring written feedback as video feedback does provide more visual elements to the student than written feedback. Although, the majority of participants did predict that they would prefer video feedback over audio-only feedback which does align with the data found in this study in regard to overall learning styles. Additionally, it cannot be denied that written feedback does still present feedback visually to the student as well, undoubtedly complicating the findings thus far, and possibly serving as one explanation for the findings presented thus far.

Nevertheless, these early predictions are most interesting when coupled with the discussion provided in Chapter 1 of this dissertation. Chapter 1 outlined the fact that the use of audio is incredibly more common than the use of video in the writing classroom, especially in L2 contexts. However, these participants showed a strong initial resistance to the use of audio for feedback. It is possible that the use of audio with this particular group of L2 students may make them less comfortable and confident in the tasks they are given based on their strong negative response toward audio comments, which may lead to decreased motivation and lower academic achievement.
The Week 15 Survey: Participants' Feedback Preferences, Connections to Learning Style Inventory Outcomes, and a Change of Opinion

Because so many participants stated that they preferred written feedback for the reason that they had not been exposed to other feedback modalities, one hypothesis might be that the participants' perceptions on video, audio, and written feedback would change, possibly significantly, once they were exposed to the modalities throughout the semester. This hypothesis turned out to be incredibly true.

In the week 15 survey, a dramatic complete reversal of survey findings is present. As seen in Table 43: Participants' Week 15 Feedback Choice and Percent Change, a 65.51% increase in the number of participants who preferred video comments is present, and a 65.51% decrease in the number of participants who preferred written comments is also present—meaning that 82.75% preferred video comments at the end of the semester and only 17.24% preferred written comments. No participants chose audio feedback at either point of the semester as their preferred feedback modality. This immense sweeping change in preference suggests that

Table 43: Participants' Week 15 Feedback Choice and Percent Change

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Week 1 Survey Results</th>
<th>Week 15 Survey Results</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Participants (Percent of Total)</td>
<td>Number of Participants (Percent of Total)</td>
<td></td>
</tr>
<tr>
<td>Video</td>
<td>5 (17.24%)</td>
<td>24 (82.75%)</td>
<td>+65.51%</td>
</tr>
<tr>
<td>Audio</td>
<td>0 (0.00%)</td>
<td>0 (0.00%)</td>
<td>0.00%</td>
</tr>
<tr>
<td>Written</td>
<td>24 (82.75%)</td>
<td>5 (17.24%)</td>
<td>-65.51%</td>
</tr>
</tbody>
</table>

exposure to all three feedback modalities over the course of the semester severely impacted the ways in which students viewed the affordances and disadvantages of each. In fact, when
participants once again rated the understandability, helpfulness, and value of all three forms of feedback, as seen in Table 44: Overview of Participants' Final Feedback Modality Preference, this change in attitude is even more apparent.

Specifically, participants rated the overall understandability of video feedback a 4.86, an increase in average rating from week 1 of .80, helpfulness a 4.82, an increase in average rating from week 1 of 1.20, and the value of video comments a 4.75, an increase in average rating of .96. The ratings for all three categories in regard to video feedback significantly increased after students gained experience with the modality. It is worth emphasizing that these increases are truly evidence of an enormous change given the surveys are based on a 5-point rating system.

Table 44: Overview of Participants' Final Feedback Modality Preference

<table>
<thead>
<tr>
<th></th>
<th>Video Feedback (average rating)</th>
<th>Audio Feedback (average rating)</th>
<th>Written Feedback (average rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understandable</td>
<td>4.06</td>
<td>3.51</td>
<td>4.31</td>
</tr>
<tr>
<td>Helpful</td>
<td>3.62</td>
<td>3.48</td>
<td>4.51</td>
</tr>
<tr>
<td>Valuable</td>
<td>3.79</td>
<td>3.44</td>
<td>4.55</td>
</tr>
<tr>
<td><strong>Week 15 Survey Results</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understandable</td>
<td>4.86</td>
<td>3.86</td>
<td>4.24</td>
</tr>
<tr>
<td>Helpful</td>
<td>4.82</td>
<td>3.68</td>
<td>4.34</td>
</tr>
<tr>
<td>Valuable</td>
<td>4.75</td>
<td>3.62</td>
<td>4.06</td>
</tr>
<tr>
<td><strong>Change in Average Rating</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understandable</td>
<td>+.80</td>
<td>+.35</td>
<td>-.07</td>
</tr>
<tr>
<td>Helpful</td>
<td>+1.20</td>
<td>+.20</td>
<td>-.17</td>
</tr>
<tr>
<td>Valuable</td>
<td>+.96</td>
<td>+.18</td>
<td>-.49</td>
</tr>
</tbody>
</table>
All average ratings regarding audio feedback also increased despite not a single participant choosing audio feedback as their final preference. This fact alone demonstrates that exposure and experience with audio feedback can lead to some increased student comfort. Additionally, participants showed an increase in understanding and acknowledging the overall merits of digital feedback modalities. By simply exposing students to feedback modalities they have never experienced before, it seems instructors may be able to open more options to appeal to a wider variety of learning styles and work to eliminate "othering" sections of a student population by not matching one's teaching style with the ways in which students learn best. Although the increases are not as large as the jump in favorable opinion in regard to video comments, participants rated the understandability of audio feedback a 3.86, an increase in average rating from week 1 of .35, the helpfulness of audio comments a 3.68, an increase in average rating from week 1 of .20, and the value of audio comments a 3.62, an increase in average rating of .18.

More substantial still is the fact that participants provided a lower rating across all three categories in regard to written feedback. Specifically, student participants rated the understandability of written feedback a 4.24, a decrease in average rating from week 1 of .07, helpfulness of written comments a 4.34, a decrease in average rating from week 1 of .17, and the value of written feedback a 4.06, a decrease in average rating of .49. Further triangulation of the data was used to fully explore these important findings through the analysis of the participants' week 15 responses.

*Participant Rationales for Week 15 Survey Responses*

Participants' written responses were analyzed to more fully understand this shift in opinion. Like the week 1 survey, students were asked to explain their final feedback preference
in week 15 of the semester after they had experienced all three modalities. Students provided more detailed responses overall in the week 15 surveys as all participants provided at least 5 sentences of written response. Responses were once again coded and then categorized, and 9 distinct categories were identified.

Firstly, the primary category found, which occurred in 44.82% of the responses, was that participants felt that video feedback appealed to the most senses or learning styles. For example, one participant wrote, "video feedback was the best because I can hear and see my teacher. This is better than writing." A different student commented by saying, "Sound and picture is good. Much easier to find mistakes and hear and see how to fix." Very similarly, another student wrote that ". . . because video feedback has visuals and sound it is easy to understand." Yet another wrote that "seeing and listening is the best way to revise." Finally, another student stated that "video feedback was the best because audio and video helped me understand my teacher better." Clearly, a large number of participants had become aware of how different feedback modalities appealed to different learning styles by the end of the semester, and were self-aware of how varying types of response impacted them. It is significant that the most common type of response praised video for the fact that it had both sound and image, which numerous participants claimed made their revisions easier.

The second most obvious category present in the responses was in regard to the clarity of video feedback. 37.93% of the student participants voiced that video feedback provided them with the clearest and most easily understandable feedback. One student wrote that "video is clear, helpful, [and] understandable. So it make[s] revision easier." Similarly, and more simply put, another student wrote, "video is the clearest form of feedback." Yet another participant stated that "video feedback is the most clear. It is really like having a tutor." Responses such as
these show that numerous students found the clarity of video comments to likely be an improvement over audio or written feedback alternatives.

Thirdly, numerous participants voiced the opinion that video feedback made the instructor seem more friendly. A student's relationship with one's teacher in L2 courses is incredibly important as students are often timid and shy. One student wrote that "after [the] first essay I thought my teacher was mad but on video he spoke very kind." Another stated, "Our teacher is very kind to use time to make videos for us. He is very nice." While a student's opinion of their teacher may not be the most important factor in the classroom, it is noteworthy that 34.48% of responses mentioned instructor kindness, and no responses mentioned instructor kindness in relation to any other feedback modality than video. Of note is that the participants' seem to believe that video comments require more effort on the part of the instructor than providing written feedback.

The fourth most common type of response, which occurred in 17.24% of the responses, were comments directed at the fact that video comments provided the opportunity to work at your own pace. While one might think each modality would provide this affordance, the ability to work at your own pace was only mentioned in reference to video comments. For example, a student wrote that "video allowed me to rewind, skip, and pause. I could work at my own pace." Numerous participants told specific stories of how working at their own pace with video feedback helped them in their outside the classroom. The first student wrote, "Video feedback was so flexible I had to show my roommate. I could work at my own pace and repeat things I didn't understand. Or even take the video on my phone to the writing center. Everything was up to me. My tutor also said video was the best for [working] on what I want." The second student said, "I have baby at my home. She has lifetime sickness. I must be in her [room] many times in
the day. Taking a paper in is hard to see and [gets] messy. I have to make the room dark so she sleeps. Video I can watch and listen and remember. Then I make the changes. Paper I cannot see, so I do not do changes." These narratives highlight particular affordances that instructors and researchers may not have in the forefront of their mind when considering feedback. The first narrative showed how video feedback allowed the participant to facilitate is learning at home as well as in the writing center with a tutor more efficiently, while the second narrative reveals how a student's personal life impacted their needs in regard to feedback. In both cases, it seems that video feedback provided the affordances they needed at the time.

Fifthly, several participants responded by saying that they didn't know they preferred video feedback until they were exposed to it during the semester. In the week 1 survey, the most common response (68.96% of all responses) was that written feedback was preferred because participants had not been exposed to other feedback modalities. At the end of the semester, in the week 15 survey, one student wrote, "I am sorry but video feedback is the best. I never had video feedback so I didn't know!" Another wrote, "I wish I have this my whole life. I did not know it would be good." The fact that 20.68% of the participants issued comments like these, seems to make it quite clear that Hyland and Hyland (2006) were correct in that instructors are doing all they can do expose students to alternative feedback techniques and the possible affordances of them.

That said, the next most common response was that the audio included in video comments helped students improve their listening skills, which occurred in 17.24% of the responses. This is the first category of response where students began moving past the ability to revise with their comments and discussed the impact varying feedback modalities can have on their speaking and listening skills as well. One student said, "In video [comments] I can match
image and sound. It improves my listening skills very much." Another participant wrote that "I thought speaking would be too hard, but I can repeat each sentence until I understand. This helped improve my listening."

While numerous participants praised video comments for the blend of audio and video, many also found auditory comments quite problematic because all information is presented through one mode of communication—audio. Consequently, the seventh most common type of response were those referencing the difficulty of utilizing audio-only feedback. For example, one student simply stated that "listening in English is too hard." More detailed responses articulated that "audio is too hard by itself. I cannot listen and go through my essay. It was very hard and took very long." These examples of response show that audio feedback presented barriers in regard to listening skills as well the amount of time needed to listen to the feedback and return to the essay. While audio feedback certainly has affordances in speaking and listening courses, it may cast too narrow of a net in regard to appealing to students' learning styles and time demands to be a useful feedback modality. Responses like these, which occurred in 10.34% of the responses, help illustrate why none of the participants chose audio feedback at the end of the semester.

The eighth most common type of response was that writing is preferred, which accounted for 6.89% of the responses. For example, one student wrote, "I prefer working with my hands. Listening is too hard, and I don't want to watch videos of my teacher." Another wrote, "I like taking the paper and writing on the paper. I want to circle and highlight." It should be noted that only 2 participants wrote such comments but both identified as tactile learners, speaking volumes about the growing evidence presented in this chapter that one's learning style impacts students feedback preferences.
The final category only accounted for 3.44% of the responses (a single participant), but is worth mentioning given the discussion presented in Chapter 1 of this dissertation regarding how multimodal and digital feedback does require one to learn new software and can present sometimes difficult learning curves for both students and instructors. The student wrote, "Video is bad because I spend much time with new software. It was hard." Clearly, at least for one student, the digital modalities provided unwanted stressors that written feedback did not present to them as a result of the Jing software's learning curve.

The participants' week 15 survey responses may also help explain why when participants' week 15 feedback choices were analyzed, all variable groups rated video feedback the highest across each of three categories surveyed in this study; that is, regardless of age, gender, field of study, or L1, the participants rated video feedback as the most helpful, understandable, and valuable modality. This truly astounding shift in preference is particularly noteworthy due to the fact that several variable groups were represented by only a single participant, yet they still found video comments to be best. What's more, variable groups such as those majoring in the Humanities and participants whose age was greater than 22, for example, who rated the understandability, helpfulness, and value of written feedback the highest, rated video feedback the most understandable, helpful, and valuable feedback modality by the end of the semester. No matter the explanation for such change, the participants are most certainly voicing that video feedback made them most comfortable and was the most useful modality throughout the semester to aid them with their assigned tasks. Still, this monolithic shift in thinking on behalf of the participants leads to several possible explanations as to why video comments were preferred by all ages, both genders, all fields of study, and all language backgrounds that will require further research to either confirm or problematize.
One such explanation is that while it is clear that the participants in this study believe video comments were best, it is possible that video feedback does actually provide more affordances to L2 student writers than written or audio feedback and that fact was realized by the student population surveyed in this study; that is, the participants may prefer video feedback because it is in actuality the most effective modality for providing feedback to L2 students to aid them on writing tasks. However, another possibility to explain the seismic shift in feedback preference is simply that the participants may have been attracted to video feedback because it was new and exciting and, in turn, reacted negatively toward written and audio feedback. Perhaps even more likely, and another possible explanation, is the fact that I may have provided written and audio comments poorly or in a less effective manner than video comments. Certainly, some participants may have had trouble reading my handwritten comments or understanding my recorded voice. Moreover, I may have unknowingly spoke about video feedback in a more favorable way over the course of the semester leading students to simply report what they thought I wanted to hear in their final week 15 survey. An additional possible explanation has to do with the syntax used in written comments versus audio and video comments; that is, written comments are typically shorter and more imperative in nature than the conversational tones provided in video feedback. Also, as outlined in Chapter 1, written comments are often misunderstood, so it is possible that the participants viewed the written feedback as a harsher critique of their work and may have experienced a mismatch between the intent of my written comments and the message they interpreted receiving. This could have led to frustration and the perception that written comments were worse than other modalities. Another possible explanation that video comments were preferred because this modality casts the widest net of appeal in regard to various learning styles as it contains visual elements, auditory
elements, and written elements. For example, video comments are tactile in the sense you can click and manipulate the on-screen feedback with the mouse, auditory in that you hear the instructor speaking to you, and visual in that you can see the instructor present images and movies to you on the screen.

However, while all of these possible explanations may have played a role in the outcomes presented in this chapter, evidence points to one major explanation for the findings—by the time L2 undergraduate students reached my classroom, they had been conditioned to think about writing education and writing assessment in a specific, singular way (teachers provide written feedback, students read such feedback and revise) that doesn't always align with one's individual learning style. It cannot be ignored that once Moody's (1988) advice was acted upon and I adapted my teaching style to the students' various learning styles and needs participants' opinions about feedback changed. After the participants (the majority identifying as visual learners) were exposed to and experienced video feedback (many for the very first time), 82.75% preferred video comments. To highlight this connection between the participants' learning styles and their final feedback preference in more detail, Table 45: Overview of Participants' Learning Styles and Week 15 Feedback Preferences outlines the participants' learning styles in combination with visual learners, auditory learners, and tactile learners.

| Table 45: Overview of Participants' Learning Styles and Week 15 Feedback Preferences |
|--------------------------------------------------|-----------------|-----------------|
| Visual Learners                                  | Auditory Learners | Tactile Learners |
| **Number of Participants (% of Total)**          | 19 (65.50%)      | 4 (13.70%)       | 6 (20.60%)       |
| Video Feedback                                   | Audio Feedback   | Written Feedback |
| **Number of Participants (% of Total)**          | 24 (82.75%)      | 0 (0.00%)        | 5 (17.24%)       |
their final feedback preference, and a similar pattern can be seen in regard to the number learners and the number of participants who preferred the closest matching feedback modality. 19 participants identified as visual learners and 24 preferred video feedback. 4 identified as auditory learners, and 0 preferred audio feedback. 6 participants identified as tactile learners, and 5 preferred written feedback. These similar trends highlight the fact that in this study a strong link exists between a student's learning style and the modality of feedback they truly prefer. Research regarding learning style preferences has revealed that balancing instructional methods and students’ learning style preferences leads to an increased comfort level and willingness to learn among students (Sims & Sims, 2006). Therefore, the results of this study suggest teachers may want to experiment with providing L2 students more visual-based information, more visual-based assessments, and more visual-based games and activities in class to provide a more fruitful, meaningful, and comfortable learning environment for L2 students.

Specifically, based on the numerous quoted responses from participants mentioned in this chapter, I believe it may be time to consider incorporating a multi-style approach to feedback; that is, an approach that utilizes not just one modality but multiple modes (especially if we consider the auditory elements of video feedback and the visual elements of written feedback). In other words, I agree with Selfe's (2009) argument that teachers and scholars should adopt less of either/or approach more of an and/both approach that emphasizes the complexity of all communicative modalities in the modern world.

Conclusion

This chapter has presented the major findings to the reader related to the participants' learning styles and feedback preferences as well as how those preferences changed after experiencing written, audio, and video feedback during a single semester. I explained how the
data show a strong relationship between one's learning style and one's feedback preference, although possible alternative explanations were given. Despite there being much variance in how student participants viewed the understandability, helpfulness, and value of written, audio, and video feedback in week 1 of the semester, by week 15 the majority of students preferred video feedback in a sample of visual learners. This overwhelming preference for video feedback suggests there is a connection between the participants' learning styles and their preferred feedback modality. Chapter 4, "Findings, The Impact of Providing Learning Style-Based Feedback on Achievement: A Grounded Theory," discusses the findings presented here in context with levels of academic achievement during this study. Such analysis allows for the creation of a substantive theory about L2 students, their learning styles, and feedback in writing classrooms which is presented in detail.
CHAPTER IV.

THE IMPACT OF PROVIDING LEARNING STYLE-BASED FEEDBACK ON ACHIEVEMENT: A GROUNDED THEORY

The following chapter discussion presents the participants' levels of academic achievement in regard to each feedback modality (video, audio, and written). These findings are discussed in relation to the major finding presented in Chapter 3, which found that participants showed an overwhelming preference for video feedback while at the same time identifying as visual learners. The data presented in this chapter show how students were able to use a variety of feedback modalities to revise and improve their and were useful in answering the study's final research question:

4. By providing feedback to students in varying modalities that both match and do not match their identified learning styles as well as their stated preference for feedback, how do instructors impact student achievement when teaching undergraduate L2 students?

Specifically, this chapter explores (1) the detailed results of how successfully participants performed essay revisions when receiving video, audio, and written feedback; (2) how academic performance, as represented by letter grades earned after revision, relates to the participants' identified learning styles and feedback preferences; and (3) whether participants self-identify their best work (as identified holistically by each individual participant) based on academic achievement, working with feedback in their preferred modality, or some other factor. Finally, a substantive grounded theory of best feedback practices for L2 students in ESOL 1010: Academic Composition II writing courses is presented based on the findings presented in both Chapter 3
and Chapter 4 entitled, "A Multistyle Approach to Feedback in the L2 Writing Classroom at Bowling Green State University."

**Academic Achievement: Student Expertise and the Importance of Video Feedback**

Although each participant in the study came from two sections of the same course, and each participant received video, audio, and written feedback during the semester, it is possible that the section one was placed in may have played an incredibly important role in this study's results and is worthy of exploration. The largest difference between course sections was the order in which students received the various feedback modalities. Specifically, students in Section 1 received written feedback first, audio feedback second, and video feedback third during the semester whereas students in Section 2 received video feedback first, audio feedback second, and written feedback third. Participants in both sections were allowed to choose their feedback modality for the final essay of the semester. By varying the order in which students in each section experienced the various feedback modalities, a more detailed analysis could be made in addition to overall academic achievement that included how the order participants experienced the modalities impacted their experience and achievement levels. Table 46: Overall Academic Achievement by Feedback Modality shows that students performed best.

**Table 46: Overall Academic Achievement by Feedback Modality**

<table>
<thead>
<tr>
<th></th>
<th>Written Feedback (average % score)</th>
<th>Audio Feedback (average % score)</th>
<th>Video Feedback (average % score)</th>
<th>Participant's Choice (average % score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1</td>
<td>72.25%</td>
<td>89.50%</td>
<td>85.00%</td>
<td>90.70%</td>
</tr>
<tr>
<td>(n=14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 2</td>
<td>90.26%</td>
<td>77.66%</td>
<td>85.00%</td>
<td>84.94%</td>
</tr>
<tr>
<td>(n=15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative</td>
<td>81.25%</td>
<td>83.58%</td>
<td>85.00%</td>
<td>87.82%</td>
</tr>
<tr>
<td>Average</td>
<td>(n=29)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
when allowed to choose their feedback modality (87.82%), second-best when provided video feedback (85.00%), third-best when given audio feedback (83.58%), and the worst when provided written feedback (81.25%). However, the order in which the feedback modality was received had a significant impact on academic achievement as well. As outlined in Table 47: Impact of the Order Feedback was Received, regardless of the modality, participants' average scores were the lowest on the first essay of the semester (78.63%), slightly higher on the second essay (83.58%), slightly lower on the third essay (83.13%), and were the highest on the fourth essay of the semester (87.82%). This overall trend of general improvement is perhaps not altogether surprising as educators expect students to improve over the course of the semester.

Table 47: Impact of the Order Feedback was Received

<table>
<thead>
<tr>
<th>Essay Order</th>
<th>First Essay (average % score)</th>
<th>Second Essay (average % score)</th>
<th>Third Essay (average % score)</th>
<th>Fourth Essay (average % score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (n=29)</td>
<td>78.63%</td>
<td>83.58%</td>
<td>83.13%</td>
<td>87.82%</td>
</tr>
</tbody>
</table>

in regard to their own skills, and students also typically grow more comfortable with their instructors' practices and requirements as well the longer the course goes on. What's more, is that the high achievement levels on the fourth essay may simply speak to the affordances of getting a second chance with a given modality as 93.00% of the participants in this study had never received video feedback prior to this study. Thus, a major condition beyond feedback modality preference at work may be simply in regard to student comfort and confidence as time passes. This may be especially true considering the participants were all multilingual writers who often struggle early in the semester understanding westernized writing conventions and practices, which can certainly impact academic achievement and one's confidence as a writer. These
noteworthy findings necessitate attention and further focused research on the link between L2 writers' levels of academic achievement and their comfort levels.

Still, the importance of the video modality to the participants' academic achievement is paramount if we recall that when given a choice 82.75% of the participants chose video feedback during the fourth essay of the semester, 17.24% chose written feedback, and no participants chose audio feedback. Thus, the large majority of students were utilizing video feedback when given a choice on the fourth essay of the semester, which accounted for the highest overall academic achievement as measured by letter grades. The fact that participants had the second highest average letter grade when using video feedback is still further evidence to support the positive impact video had on student achievement.

A number of students mentioned the direct positive impact video feedback had improving their letter grade on essay assignments in their week 15 written survey responses. One student, who stated they would prefer written feedback at the beginning of the semester, wrote that "... hearing and seeing changed my grade from [a] C to [an] A." Upon investigation, this comment was in actuality correct as this particular student earned a C grade on the first essay of the semester—which utilized written feedback—and earned an A on the third essay of the semester after receiving video feedback. Another student who also changed their reported feedback preference from written to video over the course of the semester wrote, "Written feedback I can circle mistakes easily. Video feedback has visual and audio [which] makes it easiest for revisions and better writing." Another student wrote in week 1 that "written feedback is all I ever have. I am comfortable [with it]." and in week 15 wrote, "I did not know video had sound too. Easiest to understand. Easy revisions."
Numerous similar responses were given by participants, but several responses of particular note spoke to how the video feedback I provided to my students felt more like peer tutoring than a critique of their work, which directly improved their grade. For example, one student argued that "video feedback is like a tutor. It makes my grade better." Another claimed that "video is the best for [the] first draft because it is like [a] tutor help[s] you get an A." Perhaps the most interesting comment that referenced similarities between video feedback and tutoring was one student who said that "video is even better than [a] tutor. I can have [the] video and essay out [at the] same time to make revision[s] and get a good grade. [I] can pause and work at [my] own pace. I do not go to [the] writing center because they are too fast." Scholarship has shown that one clear affordance of digital audio and video feedback has been the ability to speak in conversational tones and its ability to bring aspects of the face-to-face conference readily and easily to the student (see Chapter 1). However, what has not been previously studied is how the affordances of peer tutoring may be present in video feedback and which, if any, of these affordances we may have inaccurately labeled as experiences exclusive to writing center environments.

Should this be the case--that instructors can wear multiple hats; that is, assume the role of peer tutor by simply shifting feedback modalities while also holding the role of educator/assessor—video feedback may provide a way for students to obtain some of the benefits of peer tutoring at the writing center when receiving feedback. This finding is paramount when considering the fact that several universities and community colleges function without a writing center or other peer tutoring service. These findings combined with the fact that 65.50% of the participants identified as visual learners and the participants performed best academically (according to letter grade earned) when utilizing video feedback build further
evidence in support of the fact that there seem to be significant connections between one's learning style, feedback preference, and academic performance.

To analyze these connections even further, the findings presented thus far were triangulated by the participants' written survey responses to a question in which all students were asked to state which essay they felt was their best and worst essay after all four essay grades were finalized and reported to them. As seen in Table 48: Participants' Self-Report of Best Essays vs. Essay Resulting in Highest Letter Grade Earned, 82.75% of the participants reported that their best essay was written through the use video feedback, 13.79% thought their best essay came at the result of using written feedback, and just 3.44% of the participants thought audio feedback helped them write their best essay of the semester. The first substantial finding of note is that students were able to successfully identify which modality resulted in the highest overall average academic achievement as graded holistically by their instructor.

Table 48: Participants' Self-Report of Best Essays vs. Essay Resulting in Highest Letter Grade Earned

<table>
<thead>
<tr>
<th></th>
<th>Written Feedback</th>
<th>Audio Feedback</th>
<th>Video Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Reported Best Essay</td>
<td>13.79% (n=4)</td>
<td>3.44% (n=1)</td>
<td>82.75% (n=24)</td>
</tr>
<tr>
<td>Essay Resulting in Highest</td>
<td>27.58% (n=8)</td>
<td>27.58% (n=8)</td>
<td>44.83% (n=13)</td>
</tr>
<tr>
<td>Letter Grade Earned</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

However, while video feedback did result in higher overall grades for the majority of students, this was only the case for 44.83% of the participants in this study—a difference of 37.92%. Still, students performed significantly better with video feedback than audio or written feedback, which resulted in the highest score for just 27.58% students respectively. Thus, participants'
claimed that video feedback allowed them to compose their best essay of the semester, which proved to be true in regard to the academic grading scale.

Additionally, when students were asked to self-report which feedback modality resulted in their worst essay of the semester, their responses matched their actual worst essay of the semester (as based on letter grade generated via holistic instructor assessment). Table 49:

Participants' Self-Report of Worst Essays vs. Actual Lowest Grade Received reinforces the participants' overwhelming belief that video feedback resulted in strong compositions during the semester as just 3.44% reported that video feedback resulted in their worst essay of the semester, 27.58% believed audio feedback resulted in their worst essay, and the vast majority of participants, 68.96%, believed written feedback lead to their worst essay of the semester.

Table 49: Participants' Self-Report of Worst Essays vs. Actual Lowest Grade Received

<table>
<thead>
<tr>
<th></th>
<th>Written Feedback</th>
<th>Audio Feedback</th>
<th>Video Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Reported Worst Essay</td>
<td>68.96% (n=20)</td>
<td>27.58% (n=8)</td>
<td>3.44% (n=1)</td>
</tr>
<tr>
<td>Actual Lowest Grade</td>
<td>58.62% (n=17)</td>
<td>13.79% (n=4)</td>
<td>27.58% (n=8)</td>
</tr>
</tbody>
</table>

However, participants' perceptions did not match the grades their drafts earned. In actuality, video feedback resulted in the worst essay for 27.58% of participants, which is significantly greater than the number of participants in which audio feedback resulted in students' worst essays (13.79%). Participants did successfully identify written feedback as the modality that resulted in the highest number of worst overall essays. 68.96% of the participants stated that written feedback resulted in their worst essay and this was in actuality true for 58.62% of the participants. Thus, for the majority of the participants in this study, the overall claims of the participants' are true in regard to written feedback; that is, the modality did result in worse overall academic scores than both audio and video feedback.
The data become even more startling on an individual level as just 12 of the 29 participants' answers (41.37%) in regard to which essay was their best turned out to be correct, and just 27.58% of the participants' answers for which essay was their worst proved to be true. This is a puzzling finding given that participants knew which essays were their best essays academically before the week 15 survey was taken; therefore, misremembering which essay resulted in the highest overall grade seems highly unlikely. Certainly, the argument could be made that the participants simply did not equate their best essay of the semester with the numerical score they received, though this explanation seems unlikely given the importance placed on academic scores by both myself as their instructor as well as the university at large.

By looking at holistically the data and student insights presented in Chapter 3 and Chapter 4, a more likely explanation is that video feedback matched the majority of the participants' learning styles, which made them more comfortable—ultimately leading to the participants regarding their work on that essay in the most favorable light. And while the argument could certainly be made that by providing students video feedback, instructors may doom some students to a lower grade because students do not initially know which modality is best for them in regard to their academic score, it is just as likely that the video feedback may have helped those students with certain competencies that later helped them improve and perform better on other essays during the semester. It is not known what would have happened had students been provided video feedback on each and every essay, for example. Would the participants' overall grades in the course have been higher or lower? Currently, there are too many unknowns to consider in regard to this series of findings that would require further research before conclusions can ultimately be made. What can be plainly stated based on these findings is: even when video feedback results in lower academic achievement than audio or
written feedback, and the students are aware of such lower academic achievement, the majority of L2 students in this study still prefer video feedback and state that it results in better compositions than when working with audio or written feedback. Additionally, the majority of L2 students in this study reported that written feedback resulted in their worst writing of the semester, which was supported by the fact that such feedback did result in the lowest grade earned of the semester for the majority of students.

The statements provided by the participants support earlier findings in that mismatches between the teaching style of an instructor and the learning style of their students result in students being bored, unmotivated, and discouraged in L2 courses (Felder & Silverman, 1988; Lawrence, 1993; Oxford et. al, 1991; Schmeck, 1988), and others who have gone as far as to argue that L2 students will experience burnout, stress, and unfavorable opinions about the education they are receiving when teaching styles are inconsistent with their learning style preferences (Smith & Renzulli, 1984)—further evidence supporting the hypothesis that the matching of teaching and learning styles (the use of video feedback with a group of visual learners) resulted in participants regarding their work when utilizing video more highly than when working with other modalities.

**The Usefulness of Video Feedback on Student Revision**

While one likely key explanation for students' preference and success with video feedback is certainly the matching of teacher feedback styles and student learning styles (as mentioned earlier in this chapter), the data and student comments presented thus far in Chapter 4 seem to suggest that video feedback, regardless of students' learning styles, increased the ease in which the majority of the participants' were able to successfully revise—a participant-reported distinct advantage over audio and written feedback. However, were the students' revisions
actually more successful (accurate and substantial) when students utilized video feedback? To answer this question, each student's process of revision was analyzed; that is, students' first drafts were compared to their final drafts to determine what number of revisions were successfully and unsuccessfully revised. This "behind the scenes" approach helps unpack each student's process of revision and further triangulates the data presented thus far because it moves past the limitations of only analyzing letter grades and student reflection. Rather, this analysis looks at the heart of what good, well-considered teacher feedback strives to do: suggest and encourage revision clearly and improve student's understanding of writing and writing ability.

Ultimately, this incredibly detailed analysis reinforced the findings discussed thus far and suggest that students may have performed best on assignments that asked students to utilize video feedback as it eased the revision process and lead to a higher number of successful revisions. As seen in Table 50: Total Number of Successful Revisions, a total of 523 video teacher comments, 442 audio teacher comments, and 637 written teacher comments were made to the 29 students that requested a revision be made. These numbers do not include students' fourth essays in which they could choose their preferred method of feedback as such "second chances" with the modality would alter the investigative purpose which was to determine which modality resulted in the highest level of ease in regard to revision on the first attempt. This means, on average, an individual student received 18.03 video comments, 15.24 audio comments, and 21.96 written comments on their individual essays.

Thus, the first noteworthy finding here is that I provided slightly more comments when working with written feedback than I did when providing video or audio comments. The increase in the number of comments may have provided additional difficulty in completing the requested revisions and overwhelmed students. Further evidence to support this hypothesis is that students
Table 50: Total Number of Successful Revisions

<table>
<thead>
<tr>
<th></th>
<th>Video Comments (n=523)</th>
<th>Audio Comments (n=442)</th>
<th>Written Comments (n=637)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successfully Completed Revision Requests</td>
<td>90.53%</td>
<td>73.98%</td>
<td>80.30%</td>
</tr>
<tr>
<td>Unsuccessfully Completed/Ignored Revision Requests</td>
<td>9.47%</td>
<td>26.02%</td>
<td>19.70%</td>
</tr>
</tbody>
</table>

were able to successfully complete written revision requests just 80.30% of the time. Even more substantial was the fact that even though students were given the fewest revision requests when listening to audio comments, students successfully completed revisions more infrequently. Specifically, students successfully completed just 73.98% of requested revisions when given audio commentary despite the audio modality being the most widely discussed and researched feedback modality other than written commentary in L2 contexts (see Chapter 1). By comparison, students succeeded greatly when given revision requests through video commentary, completing requested revisions an astounding 90.53% of the time. Therefore, data show that students clearly revised best when they received video comments and most poorly when utilizing audio comments. This finding is particularly powerful when combined with several other key overarching findings this study has unearthed which have shown that (1) the participants were predominantly visual learners, followed by tactile learners, followed by auditory learners, (2) students preferred video comments first, written comments second, and audio comments the least, and (3) students performed best academically when receiving video comments, then written comments, and finally audio comments. In short, there is an abundance of evidence pointing to the importance of matching teacher feedback styles with student learning styles as well as to the positive impact video feedback had on this specific student population.
Students as Self-Evaluator

It is argued that "students cannot and should not be the sole judges of what is best for them" (Ferris, 2003, p.114). However, the results found here do not support the findings of several researchers who have compared student perceptions with students' actual work and found that what students say they like does not always result in quality compositions (Brice, 1995; Ferris & Roberts, 2001; Mendonca & Johnson, 1994). One clear concern in regard to the studies mentioned here is that the researchers do not first fully expose students to the entirety of their options so they can experience them first-hand, which severely limits the likelihood that students can accurately articulate what they will benefit most from. I believe it is for this reason that Ferris (2003) writes, "[In] studies that assess both student reactions . . . their written texts and revision behaviors have the potential to be more valuable than studies that utilize only survey data" (p. 114). Ferris' (2003) views regarding student views on response have been considered and enacted in this study. The findings presented in Chapter 3 and Chapter 4 complicate previous findings related to L2 teacher response because the majority of the student participants in this study could judge which feedback modality would result in higher quality compositions, comfort levels, and revision ability. To put it simply, students did know what was best for them.

This finding may raise more questions than it answers as it most certainly problematizes the notion that students cannot fully be trusted to articulate what teachers can do to help them obtain specific learning outcomes. Given that this study's participants are made up entirely by multilingual writers, similar future research may provide shed more light on these findings by analyzing several specific questions: which type of errors are more easily revised when L2 writers use video feedback? Do L2 writers, native English speakers, and foreign language learners differ in their responses to video feedback? Is corrective video feedback more or less
effective for L2 writers than written comments and does it function somehow differently than written corrective feedback? Does video feedback result in a higher number of successful revisions in regard to various specific syntax issues? Which revision types, as defined by Faigley & Witte (1981), are impacted the most/least when utilizing video feedback? Unquestionably, student opinions about different types of feedback on their writing seem to be an area of research that demands continued investigation.

**Research Questions Revisited: Building Blocks for Theory**

The ultimate aim of this project was to develop a substantive grounded theory that interpreted and explained the subject area in a specific setting. In other words to describe L2 students' learning styles and their views on feedback within the L2 undergraduate ESOL 1010: Academic Composition II courses at Bowling Green State University. The aim of this investigation was not to make these findings generalizable across all L2 undergraduate classrooms. The study was successful in creating a new theory about this specific population, entitled "A Multistyle Approach to Feedback in the L2 Writing Classroom at Bowling Green State University." The theory is well supported by the data presented thus far as well as the perceptions students shared in their written survey responses about the various feedback modalities. However, before articulating the details of such theory, it is beneficial to answer each research question this study aimed to answer as each has fueled the creation of the theory discussed in this chapter. As seen in Table 51: Research Questions Addressed, the study provided data that allowed questions to be addressed directly with well-supported findings.

**Table 51: Research Questions Addressed**

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Answer to Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do L2 students enrolled in ESOL 1010 courses at BGSU</td>
<td>82.75% of the student participants preferred receiving video feedback; 17.24% preferred written</td>
</tr>
<tr>
<td>1. What do L2 students prefer receiving audio, written, or video feedback from their instructor on essay assignments?</td>
<td>Feedback; and 0.00% preferred audio feedback</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2. Do L2 students' feedback preferences match their identified learning styles as tested by a learning style inventory survey</td>
<td>• In general, yes: 65.50% of students identified as visual learners and 82.75% of students preferred video feedback; 20.60% of students identified as tactile learners and 17.24% preferred written feedback; and 13.70% of students identified as auditory learners and 0.00% preferred audio feedback</td>
</tr>
<tr>
<td>3. By providing feedback to students in modalities that both match and do not match their identified learning styles, how do instructors impact student achievement when teaching undergraduate L2 students?</td>
<td>• Students performed best when allowed to choose their modality of feedback (87.82% average) • Students performed best when using video feedback (85.00% average), and worst when working with written feedback (81.25%) • Student participants believed their best work occurred when working with feedback that matched their identified learning styles even when (1) their academic scores did not reflect this and (2) students were made aware of this mismatch prior to surveying their opinions on best work • Overall, students performed best when working with video feedback and the worst when working with written feedback</td>
</tr>
</tbody>
</table>

The first research question asked: do L2 students enrolled in ESOL 1010 courses at BGSU prefer receiving audio, written, or video feedback from their instructor on essay assignments? Data show that 82.75% of the student participants preferred receiving video feedback; 17.24% preferred written feedback; and 0.00% preferred audio feedback. Thus, the first conclusion used in the theory building process is that the majority of participants preferred video feedback on writing assignments.
The second research question asked: do L2 students' feedback preferences match their identified learning styles as tested by a learning style inventory survey? In general, there was a direct connection between the number of participants who identified as each learning style and the number of participants who preferred the corresponding style of feedback. Specifically, 65.50% of students identified as visual learners and 82.75% of students preferred video feedback; 20.60% of students identified as tactile learners and 17.24% preferred written feedback; and 13.70% of students identified as auditory learners and 0.00% preferred audio feedback. The second conclusion used in theory building process, then, is that students' learning styles did generally agree with their preferred feedback modality.

The final research question this study set out to answer was: by providing feedback to students in modalities that both match and do not match their identified learning styles, how do instructors impact student achievement when teaching undergraduate L2 students? Data show that students performed best when using video feedback (87.82% average score) and worst when using written feedback (81.25%). Therefore, the third conclusion used to create theory was that in a class of students whose majority were visual learners, video feedback resulted in higher academic achievement than audio and written feedback. These three conclusions were used to create a theory that asks instructors to consider change—a change not unlike pedagogical shifts that have come before it.

A Substantive Grounded Theory: A Multistyle Approach to Feedback in the L2 Writing Classroom at Bowling Green State University

Over three decades ago, Hodges (1982) stated that "approximately 90% of traditional classroom instruction is geared to the auditory learner. Teachers talk to their students, ask questions, and discuss facts" (p. 30). In an effort to provide a solution to such a classroom
dynamic, some learning style theorists argued that teachers should change their pedagogical habits to cater to the individual learning style of each of their students (Dunn, 1984). However, other scholars at the time pointed to the fact that schools exist to serve both the individual as well as society at large; thus, the individual cannot be catered to at all times, nor should they be at the risk of being detrimental to their education (Davidman, 1981). I agree with the latter. It is true that L2 students, like anyone, will undoubtedly be called upon to work and solve problems in situations that require the use of their less preferred modes of learning and that dismissing such exposure would, in fact, be detrimental to a student's development. Furthermore, Davidman (1981) argued that learning styles do not function in the same way as biological traits and can evolve and change over time, and Fourier (1984) also found that students tend to "learn intuitively to adjust to instructor and cognitive styles (p. 153).

But, should students be expected to continuously adjust to each of their instructors if means are available for the instructor to easily adapt to the student in a way that provides specific affordances to them? Moody (1988) noted that “one cannot expect a student to adapt to the instructor. Rather, the instructor must design approaches that will take advantage of the student’s unique talents” (p. 389). Over time, the once heralded lecture gave way to the critique of the banking method of education (Freire, 2000), and classrooms became more about doing, investigating, and the notion of the teacher learning with the student took hold. Today, many instructors have moved away from the lecture nearly entirely and utilize a flipped classroom in which lectures are provided to students as homework and students primarily use class time to work, not listen to the teacher speak. Certainly, though, there is still a time and place for the lecture as when it is used effectively it can aid students greatly in a large number of contexts and situations.
In many ways, it seems as though we are moving toward a similar wave of change in regard to the ways in which we can provide feedback to L2 students. Although the modern classroom is perhaps no longer strongly dominated by the spoken word, the primary way in which feedback is given on writing assignments in modern L2 writing courses remains dominated by alphabetic text despite the fact that the students in this study did not prefer written feedback and performed poorly when they received it compared to other modalities. This is particularly puzzling given that the modern writing classroom regularly asks students to write in digital spaces, conduct research using digital tools, create and compose blogs, interact with their instructors using social media, analyze the rhetorical practices of digital media, create websites, PowerPoint presentations, and so on.

However, the focus on digital compositions and communication in writing courses today seems to be centered on student-to-teacher and student-to-intended audience communicative practices; that is, the modern writing classroom seems to rarely, if ever, be commonly associated with digital teacher-to-student compositions and communicative practices. I believe that this both creates and reinforces a disconnect between writing instructors' emphasis on the importance of digital rhetoric and communication and their actual day-to-day practices they engage in with students. In fact, this disconnect may be why some students do not view multimodal and/or digital compositions as writing (when, in fact, it is writing formatted in differing genres and modalities) and may also explain why the participants reported that they would prefer writing from their writing instructor.

This hypothesis is supported by students' week 1 survey responses in regard to the normalcy of written feedback and the hesitancy toward video and audio feedback. One student wrote, "[Written] will be best. I am used to it." Another stated that "writing is [familiar] to me. I
do not want video." As a final example, one participant, who marked their preference for written feedback, wrote, "Written feedback will be good because this is [a] writing class. Video [and] audio will be good for my speaking class." Although further research is needed, the initial hesitancy toward audio and video feedback by students in this study might be explained partially, or even entirely, by the student perception that audio and video feedback is not writing, is not behavior typical of a writing course, and therefore is a practice that does not belong in a writing course. In many ways, writing instructors (all instructors, for that matter) may be problematically trapped by university alphabetic mandates. At the majority of universities in the United States, dissertations must be submitted as alphabetic texts, and although some progress is being made in this regard (Ball, 2004; Gossett, 2013; Kuhn, 2005; Purdy & Walker, 2010; Selfe, 2009; Smith, 2010; Smith, 2015), essays are typically required to be typed in Microsoft Word, syllabi are to be text-based, and so forth. In other words, the university is quite panoptic in nature, regulating our behaviors in teacher training, curriculum design, and pedagogical approaches. Until alternatives to such mandated practices are continually advocated for, considered, studied, and proven to be beneficial, which this study begins to do, change may be a slow, difficult road.

The results found in this investigation can certainly be seen as support for change as they indicate that the use of video feedback can be a key strategy to diversify the ways in which feedback is provided by instructors to students without catering one's entire teaching style to utilizing video and/or the consideration of student learning styles. By either surveying students' feedback preferences and providing feedback accordingly or by simply providing video feedback to all students, even on some writing assignments, during the semester, instructors would be lessening the dominant nature of text while appealing to a wider range of learning styles in a similar way the move away from the lecture has benefited students and facilitated the learning
process more effectively. Specifically, because video feedback utilizes video, text, and sound, it allows instructors' feedback to simultaneously accommodate all three learning styles at once. Even the act of simply providing students with a learning style inventory can be beneficial for students. Research has shown that when students have an awareness of their own learning styles they can better understand how their individual learning styles may align or contrast with their instructors' teaching styles so they can then devise strategies for dealing with teaching styles that lie outside their comfort zone (Reid, 1987; Xiao, 2006).

I posit that a multistyle approach to bettering the educational experience for L2 students in writing courses should be strongly considered and involves just 2 specific pedagogical strategies that (1) educate L2 students about their own learning styles and how they can impact their education and (2) provides feedback to L2 students in the most widely preferred modality that appeals to the highest number of individual learning styles. To do this:

1. L2 writing instructors should provide students with a learning style inventory during the first week of class and dedicate class time to discussing how individuals' learning styles (visual, auditory, or tactile) either align or differ from the instructor's teaching style

2. L2 writing instructors should incorporate (on at least 1 writing assignment) either:
   a. Video feedback
   b. Individualized feedback (written, audio, or video) based on the results of the learning style inventory provided to students—preferably at the start of the semester

By using this multistyle approach, instructors can also raise students' comfort levels by providing students with information about their own learning styles and provide feedback in a way that will also raise student comfort on at least one writing assignment without the need to change one's
teaching style significantly or re-create this entire dissertation study by exposing students to all 3 forms of feedback over the course of a given semester. Instructors should be sure to also take the learning style inventory and communicate the results with their students to promote open dialogue, full transparency, and deepen their own understanding of potential matches and mismatches in teaching and learning styles with their students.

This multistyle approach takes into consideration the findings of this study in unison with previous scholarship on learning styles and multimodal feedback to provide an improved educational environment for L2 students while avoiding several major dangers that could arise from the misuse of learning style assessment practices. First, this multistyle approach avoids turning learning style inventory results into stereotypes that deny students the opportunity to develop fully and learn how to succeed in varying social environments because the approach focuses on (1) educating students about moments they will experience mismatches between their learning style and their instructor's and (2) assures students will likely experience a match between teaching style and learning style during the feedback process during the course which has major benefits to students as discussed throughout this dissertation. Moreover, this multistyle approach does not devalue the complexity of L2 education or the feedback process by putting forth the false argument that all situations which require instructor feedback can be improved by providing video feedback—rather, video or individualized feedback based on learning style preferences should be utilized once. A multiplicity of interacting factors must then be considered to determine if such feedback will continue to serve one's student population in productive ways: the impact of teacher and student learning styles, the local goals of the writing program and course, the individual academic and social needs of each student, the nature of the current and future learning task, the personal relationship between teacher and student, and each and every
other variable that make each student and each teaching moment unique. In other words, while the learning style preferences of students are unquestionably an important consideration, they should not be the sole basis for designing instruction or feedback strategies (Gregorc, 1979).

**Conclusion**

This chapter has presented the major findings related to the participants' level of academic achievement when working with various feedback modalities over the course of the semester. I discussed that the results of the study show a strong relationship between one's learning style and one's levels of academic achievement, although other explanations such as the order in which essays were written were also discussed. Also, participants in the study could successfully identify which modalities resulted in their best and worst work in regard to the traditional academic grading scale at the end of the semester. The study's initial research questions were revisited and answers to each were provided. I argued that such answers served as the building blocks for the creation of the substantive grounded theory, "A Multistyle Approach to Feedback in the L2 Writing Classroom at Bowling Green State University." Comparisons were drawn between the theory's call for change and other historical pedagogical shifts. Chapter 5, "Measuring Validity, Future Research, and Revitalizing the Importance of Teacher-to-Student Communication," provides a set of broad conclusions and demonstrates how the aims and objectives of a grounded theory, as introduced in Chapter 2, have been addressed. Specifically, the credibility, originality, resonance, and usefulness of the theory will be addressed. In addition, contributions to the field of study at large, the overall limitations of the study, and a detailed discussion of approaches to future research are presented. Several instructor-based insights are also provided about how the study impacted my overall classroom, pedagogy, and student population in an effort to provide even further triangulation of the study's impact.
CHAPTER V.

Measuring Validity, Future Research, and Revitalizing the Importance of Teacher-to-Student Communication

In this final chapter, I highlight the contributions of this dissertation to the fields of TESOL and Rhetoric and Composition. I discuss how such research may serve as a voice for students to speak back to instructors and writing program administrators to spark change, how students preferred video feedback, and how a multistyle approach to feedback may benefit students locally at BGSU and benefit other writing programs as well. I also consider the study's main limitations, which are likely attributed to the duration of the study, the relatively small number of participants, and the curricular restraints of employing the grounded theory I suggest implementing in Chapter 4. Additionally, I revisit the criteria for a successful grounded theory outlined by Charmaz (2006) and Strauss and Corbin (1990), and I discuss how each criterion was addressed in this study. I also discuss several instructor-based conclusions that I noticed while conducting the study. For example, students still regularly struggled with the concept of revising the overall structure of their writing, with explaining their ideas fully, and with finding their own voice. I close the chapter by offering numerous suggestions for related further research while looking forward at the future of writing assessment in the 21st century.

Contributions to the Field: The Overall Significance of the Study

I have investigated the implications of providing video, audio, and written feedback to L2 students over the course of a single semester and how such a practice impacts students. My work attempts to serve as the voice of L2 undergraduate students in writing courses at Bowling Green State University and has functioned as a space to make their voices heard. The results may
impact the ways in which writing instructors and writing program administrators think about the value of their students' voices, the ways in which students' voices are heard through the use of surveying, and change the ways essay response is discussed. My research offers two primary contributions: an understanding of the L2 student population's feelings in regard to the specific issue of instructor feedback on essays in writing courses; it also shows how teacher research could be a successful strategy for better understanding our students' needs and opinions.

Specifically, I show that the majority of the 29 L2 students surveyed preferred video feedback and identified as visual learners while and also performed best academically when using video feedback. The students also voiced a strong dislike for written feedback and performed the worst (in regard to letter grade earned) when working with written feedback. A Multistyle Approach to Feedback in the L2 Writing Classroom at Bowling Green State University advocates for the use of learning style inventories in writing courses and calls for instructors to utilize either video feedback or individualized, learning style based feedback on at least one essay a semester to achieve the pedagogical goal of resisting a blanket approach to feedback, educating students about their own learning styles and potential mismatches with their instructor, increase student comfort, and more visibly consider issues of diversity. The data I found here call for more empirical studies that investigate the impact of multimodal feedback on L2 students to be conducted so that educators might better understand L2 students' learning styles (see Chapter 1).

While the theory I created may benefit L2 students locally at BGSU, teaching faculty and writing program administrators from other institutions may also be motivated to enact similar studies in which they may find similar or disparate results than the conclusions I found locally at BGSU. Future similar studies would also contribute to this burgeoning area of research and
could lead to instructors (1) better understanding their student populations; (2) educators more thoroughly considering the learning environments their students find themselves in; and (3) furthering the discussions related to the arguments put forth in this dissertation. The areas of multimodal feedback and learning styles have received very little attention by scholars in L2 contexts thus far. This data combined with similar future studies could begin to determine whether learning style inventories could be used to accurately predict how a student will respond to various feedback modalities both emotionally and academically as well as tell us much about students' perceptions toward audio, video, and written feedback and how these modalities impact students, their learning processes, and their academic achievement. Thus, despite including a relatively low number of participants, my study has provided rich qualitative and quantitative for providing feedback to L2 students on essay assignments, and it seems clear that the results suggest that the majority of today's L2 students in ESOL 1010 courses at BGSU prefer the use of digital video teacher comments and earn higher grades when they receive such feedback (see Chapter 4 for a complete explanation of the substantive grounded theory generated from the data in this study).

**Key Limitations of the Study**

As the participants' instructor as well as the researcher, I am aware that there were a number of possible inadequacies with the study. The majority of shortcomings are likely attributed to the duration of the study and the number of participants. For example, there were just 29 participants in this study and several variables (language background, field of study, etc.) were represented by only a single participant at times. Certainly, a study that was more longitudinal in nature that spanned several semesters or years could have provided a more detailed set of data and assured that all variable groups were more equally represented in all
regards. Because findings are based on a small sample size, they are not generalizable across a large population. In response to this, it should be pointed out that it was not the aim of this study to do so. Rather, a grounded theory methodology was used (the limitations of which addressed in Chapter 2) to develop a small-scale, localized substantive theory.

Another possible inadequacy is that although the participants came from two different sections, they were all enrolled in the same course during the same semester, Academic Composition II. Because of this fact, the nature of the writing tasks I assigned to participants were all nearly identical; that is, all 4 of the writing assignments students were asked to complete in this study were academic-style essays. While this lack of diversity in assignments may actually serve as a positive in that the data, then, highlighted participants' evolving opinions on the effectiveness of each feedback modality for a specific style of writing assignment, it would certainly be useful to have assigned students different writing tasks to investigate each feedback type's effectiveness with different styles of composing tasks. If my study were to have been structured in this way, it may have allowed conclusions to be made about which type of feedback works best to improve students' overall essay writing skills as well as other forms of L2 student writing—an area of interest that was intentionally left unexplored in this study.

A third limitation has to do with the quality of feedback given. I did not devote time to analyzing the quality of my feedback. To better triangulate the students' perceptions, an outside writing scholar could have been included as an additional researcher/rater to evaluate the overall quality of the feedback I provided to students across each modality. Although I did my best to assure all feedback was the best I could provide at all times throughout the semester, there is no guarantee the quality of feedback was equal across all modalities (video, audio, and written). In fact, I strongly preferred providing video feedback during the semester for a number of reasons:
video feedback felt more natural, video feedback took less time, video feedback eliminated misunderstandings in regard to my penmanship, video feedback allowed for the inclusion of voice inflection so that I could offer support and urgency with ease, video feedback allowed for the inclusion of various elements (graphics, audio, etc.), video feedback allowed me to create and utilize video demonstrations (how to use library website, how to format a page, etc.) while providing comments simultaneously, and video feedback caused me less physical stress and pain (no wrist pain from writing or typing at great length). I am unclear whether or not my own preference for video feedback impacted the quality of my feedback when working in my non-preferred modes of communication (audio and written comments).

A fourth limitation to any study utilizing teacher research is the students’ demographic backgrounds included in the study. For the purposes of this study in making use of the learning style inventory I needed to consider whether issues of equal access would be a factor. In this specific study it was not; however, it would be problematic to assume that this would always be the case because students “include people with a wide range of visible and invisible disabilities—cognitive, learning, emotional, psychological, and physical” as the CCCC position statement on disabilities reminds us (A Policy on Disability in CCCC).

Finally, I had never previously used a grounded theory methodology when conducting a research project. It could be seen as a limitation that I spent a considerable amount of time and resources learning how to code, categorize, and analyze the data. However, my grounded theory research project has been a valuable learning experience that has strengthened my understanding of grounded theory and may help others carry out similar studies as mentioned earlier in this chapter. In addition, and to my knowledge, the methodology had not previously been applied to the subject area of L2 students' learning styles and their preferred feedback preferences in our
field. Thus, while my own inexperience might be seen as a limitation, it also serves as yet another contribution to the field as it exemplifies that a grounded theory methodology is a useful tool to study individuals' perceptions in the field of English, not only in the more traditional areas grounded theory is used like the sciences and the health care field.

**Curricular and Institutional Constraints of Enacting a Multistyle Approach to Feedback**

My call for the implementation of a multistyle approach to feedback in the L2 writing classroom is admittedly no easy task, and it is not my intention to suggest or oversimplify the call by stating that the two-step process to implement it (see Chapter 4) is an easy one. In fact, there are key material conditions that might make the integration of video or audio feedback a significant challenge for instructors in a number of programs and at various institutions. While some campuses across the world have a wide array of technologies available to them, others simply do not. Additionally, because students enter universities with disparate backgrounds, economic and social inequality cannot be avoided. All students are diverse and have a wide range of social and financial abilities that impact how they perform at the university.

In regard to technology specifically, these inequalities are typically referred to as the "digital divide." For example, in their chapter, "Literacies and the Complexities of the Global Digital Divide," Selfe and Hawisher (2009) state that as new technologies develop more rapidly with each passing day, there is a "disparity between people who have access to the use of computer technologies [and] computer networks . . . and those who do not" (p.1500). Selfe and Hawisher also specifically argue that "wealth also plays a large role in determining who can acquire digital literacies and those who cannot" (p. 1523). This means that implementing my multistyle approach to feedback that demands students have access to digital technologies could be a problem for many students in writing classes that do not regularly meet in computer labs or
find themselves in courses with no prerequisites that require they bring a computer to class with them. Additionally, this may be particularly problematic for L2 students because Chisholm et al. (1998) found that L2 students were far less likely to own their own computer that native English speaking students at the university level, although this research is a bit dated. Still, Selfe and Hawisher (2009) point out that about 94% of all Internet users live in the 40 richest countries in the world, and in Africa there is just a single Internet user for about every 250-400 people compared to a North American and European average of about one in every two people, reinforcing the overwhelming significance of how the digital divide can extensively impact L2 students. Selfe and Hawisher reference a case study they conducted with a Chinese student, Pengfei Song, whose progress in attaining English proficiency, the authors determine, was completely tied to his educational achievements and digital literacy.

However, in response to the problem of the digital divide, I conducted this study in a small, relatively "low-tech" classroom—a classroom space with no computers—only marker boards and an overhead projector—and there were no prerequisites in place that explicitly stated that enrolled students needed to bring a computer to class. Rather, students had the option to download their digital audio and video feedback from any computer or mobile device. This afforded students a number of access points to my comments as they could access my feedback from the campus computer labs, their own computers, their own mobile devices, their friends’ computers, tablets, and mobile devices, or meet with me during office hours to obtain their feedback using my office laptop computer. Also, all software I used and asked students to use were free and the only computing tasks students needed to access their feedback were to login to their campus e-mail account, click on a link to the file I sent them, and then click the play button to either listen to or watch my feedback on their essays. Much has changed since Chisholm et al.
(1999) published on the digital divide and issues of access, and although these issues still exist today as proven by scholars like Selfe and Hawisher (2009), tablets, smartphones, and computers have become less expensive over time, are sometimes available for rent through campus and community libraries, and are commonly used by most students in today's classroom whether specifically required by the instructor or not.

**Meeting the Criteria of Grounded Theory**

Charmaz (2006) argues that placing a grounded theory in its particular localized social context strengthens the theory as this enables future researchers to draw comparisons between this study and others to increase the generalizability of the findings. The grounded theory I developed is specific to the current and particular time the study was conducted and the social and local context of the ESOL 1010 courses I taught at Bowling Green State University. In addition, the findings of this study are dependent upon the place and time the study was conducted, the individual personalities of all participants, and the numerous other localized factors that influenced the results of this study as discussed in Chapter 3 and Chapter 4. The following discussion revisits the criteria for grounded theory studies, as presented in Chapter 2 of this dissertation study.

**Strauss and Corbin's (1990) Criteria for Grounded Theory Studies: Standards and Validity**

As mentioned in Chapter 2, Strauss and Corbin (1990) outline 4 criteria for grounded theory studies. The goals of these criteria focus on standards and validity. I clearly met Strauss and Corbin's (1990) criteria in this study, and the details of the substantive grounded theory, "A Multistyle Approach to Feedback in the L2 Writing Classroom at Bowling Green State University," were discussed in great detail in Chapter 4 including a discussion of how such a theory could be put into practice. However, it is worthwhile to re-examine how each of Strauss
and Corbin's (1990) 4 criteria were directly and successfully addressed by my study. First, of Strauss and Corbin state that a newly developed grounded theory should result from the analysis of a wide range of diverse data. This was most certainly the case in this study. While the majority of data came from participant surveys, two surveys were used. One was provided in week 1 and another in week 15 of the semester to obtain participants' initial feelings and perceptions so any changes to those feelings and perceptions could be tracked and analyzed as the semester came to a close. However, not only was the time the surveys were provided to the participants diverse, the types of questions I asked participants to answer were also diverse in nature. Some questions utilized a Likert scale, others were multiple choice in nature, some asked for demographic information, others asked for written responses, and so on. As a result, not only were my surveys diverse in regard to when they were given, the questions I asked my participants were also diverse in nature to assure that the student participants had multiple ways to share their opinions and make their perceptions known.

Another intentional step to ensure diversity of data was that the data for this study came from 2 of my own courses whose student bodies were comprised of varying diverse student populations. By obtaining data from more than just a single course, I included participants that were born in a wide range of countries, I assured a more equal representation of gender, I boosted the number of fields of study that participants were majoring in, I diversified the number of the participants' native languages, and I increased the likelihood that the participants would have a diverse range of previous experiences with technology in the writing classroom. Another major benefit of utilizing two courses rather than one was that it resulted in dissimilar data that allowed for the analysis of whether or not the order in which student participants received the various feedback modalities impacted the participants in measurable ways.
Finally, my own instructor observations and grades that I awarded students provided some triangulation to the reported perceptions and feelings of the participants in regard to each feedback modality. This allowed me to verify the validity of students' comments in regard to how the various feedback modalities impacted their academic achievement levels and also allowed for a discussion of possible reasons why disconnects between perceived academic success and "actual" academic success (as I saw it) on a traditional grading scale may have occurred. Consequently, as a result of using a wide variety data collection methods, I clearly met the first of Strauss and Corbin's (1990) criteria for grounded theory studies.

Strauss and Corbin's second criterion states that once a wide range of diverse data leads to the development of a grounded theory, the theory should improve the understanding of a concept and be explained in a way that is understandable to the reader. Firstly, the grounded theory I developed improved the understanding of an abundance of factors related to the research questions outlined in Chapter 1 and the 16 findings:

1) The majority of multilingual writers in ESOL 1010 courses at BGSU were visual learners.
2) The majority of both males and females in ESOL 1010 courses at BGSU were visual learners.
3) One's major influenced learning styles only to a small degree. The majority of participants in each field of study (excluding the Humanities) identified as visual learners. Those majoring in the Humanities identified equally as visual and tactile learners.
4) The majority of Arabic, Chinese, French, German, Hindi, Korean, Serbian, and Spanish speakers all identified as visual learners. Vietnamese speakers, although only
represented by 1 participant, did identify as a tactile learner. In sum, one's native language scarcely influenced one's preferred learning style.

5) L2 writing instructors regularly provide written feedback (100% of the participants had received written feedback prior to starting this class), very rarely provide audio feedback (27.59% of the participants had received audio feedback prior to starting this class), and almost never utilize video feedback in the L2 writing classroom (just 7% of the participants had revived video feedback prior to starting this class). This builds on and contributes to a wealth of scholarship (see Chapter 1) that lauds the use of audio feedback with English language learners, yet multilingual writers in my courses reported rarely receiving such feedback from their previous teachers.

6) Participants initially preferred written feedback over video and audio feedback in week 1 of the semester.

7) Age had a small impact on the predicted preference as older participants tended to be more resistant to audio and video feedback overall.

8) The participants' overall week 1 preference for written feedback was present for both males and females, although females were slightly more receptive initially receiving digital feedback modalities than males.

9) The students' initial preference for written feedback remained across the majority of fields. However, Medicine majors reacted the most negatively to written feedback, and Humanities majors reacted the most negatively to the proposition of receiving video feedback.

10) At the start of the semester, a preference for written feedback was present across nearly all language groups. Serbian and Vietnamese speakers were the only language
groups to initially prefer a different modality and both preferred video comments over written comments at the start of the semester.

11) In Week 1, 82.75% of the participants preferred written feedback, 17.24% preferred video comments, and 0.00% preferred audio comments.

12) By Week 15, all participant variable groups, (gender, age, field of study, etc.) preferred video feedback. In sum, 82.75% preferred video comments, 17.24% preferred written comments, and 0.00% preferred audio comments. This switch is monumental and significantly improves the field's understanding of how multilingual writers react when exposed to feedback modalities other than written comments (in many cases for the first time).

13) This study's group of participants identified as visual learners (65.50%) and the vast majority of the participants (82.75%) strongly preferred visual feedback after they were exposed to and utilized video as a feedback modality during the semester.

14) The finding that the majority of L2 students were visual learners sharply contrasted with earlier findings in regard to L2 student learning styles (Reid, 1987), which greatly adds to the understanding of how multilingual writers' learning styles may have evolved over the last several decades.

15) The participants' average grade through the semester was highest when using video comments (85.00%), second-best when working with audio feedback (83.58%), and worst when utilizing written feedback (81.25%). These findings support the field's argument that audio feedback is an improvement over written feedback for multimodal writers (despite the students' feelings and lack of preference toward such feedback) but highlight and problematize the field's lack of attention to video
feedback as an equally efficient or superior modality for providing feedback to multilingual writers in writing courses.

16) Video feedback resulted in more successful revisions than any other modality, which greatly contributes to ongoing conversations related to student revision and student motivation to complete such revisions. When using video feedback, students completed revisions successfully 90.53% of the time. When I provided written feedback to students, revisions were completed successfully 80.30% of the time. When working with audio comments, participants completed revisions successfully just 73.98% of the time.

Strauss and Corbin (1990) also state that the newly developed grounded theory must be understandable to the public. The grounded theory I developed in this study was explained clearly and concisely in Chapter 4. In fact, a simple two-step approach in regard to how to implement a multistyle approach to feedback is provided and discussed in much detail (see Chapter 4).

Finally, Strauss and Corbin (1990) write that a grounded theory must be clear about which specific context and conditions it applies to. In Chapter 2, I specifically state that the local focus of the study is the group of students enrolled in my own ESOL 1010 courses at Bowling Green State University largely due to the limited previous scholarship on video feedback and multilingual writers. This clear, contextualized focus on students enrolled in just 2 sections of a single course allowed me to gather a large amount of specific detail; however, such specific detail is difficult to generalize and apply to other university writing programs as well as other diverse student bodies of multilingual writers. In sum, because it was not my goal to make the findings generalizable (because previous data was extremely limited), a substantive ground
theory was developed and explores one specific area—links between multilingual writers, their personal identities, their learning styles, their perceptions on multimodal feedback, and the impact of implementing such feedback into the ESOL 1010 classroom at Bowling Green State University. I did not develop a formal theory because the setting and goals of the dissertation study are simply not transferable across all classrooms, universities, etc.

As I mention in Chapter 2, Charmaz (2006) expands on Strauss and Corbin's (1990) criteria for a successful grounded theory and presents 4 criteria that grounded theories should strive for. Given the importance of Charmaz's contribution to furthering our understanding of how to measure validity in newly developed grounded theories, those criteria are also now revisited and discussed in relation to how they were met in my study.

Criterion 1: Credibility

The criterion of credibility is about the links between theory and data, such as logical links between the empirical data, the main argument of the study, and the analysis. For this study, I collected a range of empirical data in the form of surveys and grade analyses to develop the grounded theory. I carefully devised codes from the surveys and categories were developed based on those codes, which have formed the basis for my grounded theory.

Criterion 2: Originality

The criterion of originality assesses whether the categories developed in the study offer new insights into the area of research. My study is of significance because L2 students learning styles have not previously been researched in relation to their experiences with and preferences for various feedback modalities. The finding that the majority of students in this study identified as visual learners and also strongly preferred video feedback sheds new light on L2 student writers' learning styles as well as on the ways in which instructors provide feedback.
**Criterion 3: Resonance**

The next criterion, resonance, aims to ensure whether the conclusions drawn from the data portray the participants' actual experiences. The data collection and data analysis processes during my study were conducted in a continuous, alternating sequence in order to verify early findings and to ensure the validity of the findings; that is, the categories that emerged should accurately represent the entirety of participants' voices included in the study. I also analyzed participants' written comments alongside their survey responses and the categories unearthed by the researcher were checked numerous times to ensure there was consistency between my findings and the direct responses made by the participants.

**Criterion 4: Usefulness**

This criterion evaluates whether the new grounded theory is related to individuals' daily lives and whether it can have transfer; that is, whether the theory can be applicable to other areas than the one under study. The primary reason I used grounded theory in this study was to learn how a specific group of individuals (undergraduate L2 students enrolled in ESOL 1010: Academic Composition II at BGSU) perceived the use of 3 varying feedback modalities and how their perceptions related to their learning styles as opposed to, for example, L2 students enrolled in other courses at BGSU. For this reason, data collected in this study were aimed at capturing a specific group of individuals' feelings and opinions and to provide them the means to express what is important to them about this specific context. In other words, the narrow focus of this study was intended. Further research is necessary to build on these findings and develop a more generalizable grounded theory that could be more transferable in nature.
Instructor Conclusions: Additional, Personal Lessons Learned

By conducting this study, I, as the instructor and primary researcher, learned much about my classroom, my pedagogy, and my students. In fact, there were numerous insights gained in addition to what was shared in Chapter 3 and Chapter 4, several of which worthy of mention. Firstly, regardless of the modality used to provide feedback during this study, and even when students understood the intent of my comments, students still regularly struggle with the concept of revising the overall structure of their writing. In addition, the participants in this study struggled with explaining their ideas and finding their own voice. Students showed more confidence when asked to make grammatical revisions and sentence-level edits, and they regularly requested templates to help them find their voice. No feedback modality seemed to lessen or worsen this phenomenon. I posit that the students in this study would have benefited greatly from a curriculum that worked more transparently in regard to revision strategies. In fact, a curriculum dedicated to explicitly teaching students how to read, understand, and apply their teacher's feedback would have been a great aid to the participants of this study.

Secondly, the students clearly shared the perception that video feedback took the most time and effort for the instructor to create, and students thanked me consistently for producing it. While the perceived friendliness of an instructor should not necessarily be a primary concern when considering pedagogy, no student during the semester explicitly thanked me for written or audio feedback. In fact, in the week 15 survey, 48.28% of the participants marked that video feedback made the instructor seem more friendly, and 34.48% of the participants stated that written feedback and audio feedback resulted in the instructor appearing less friendly.

A third instructor-based conclusion of importance is that only video feedback allowed me to feel that I was truly giving the students something beyond standard feedback; that is, there
were specific features of video feedback that allowed me to feel as though I was providing more in-depth feedback and evaluation. Because video feedback allows the instructor to zoom in and highlight specific portions of the text, use the mouse to draw attention to a specific section (or series of sections) in the paper, and share any and all resources available on my own personal computer (saved audio files, internet searches, library demonstrations, images, etc.) as well as the Internet, I was able to provide much more than I could with just my own handwriting or voice. However, another lesson I quickly learned when providing video feedback was that it is easy to get lost in the possibilities video feedback affords. When using video feedback, instructors must consistently be mindful of their own time and risk overwhelming themselves or their students with feedback that is far too extensive. Rather than include too much in one video, instructors should remember to not attempt to replace face-to-face office meetings and in-class lectures with individualized video feedback unless the situation feels appropriate. Jing only allows for the creation of short videos, and it is currently debatable how long video feedback should be, thus instructors may want to consider creating supplemental videos in addition to the video feedback they would normally provide to cover other competencies such as library demonstrations, and so on.

Perhaps even more substantial than the conclusions mentioned thus far was that, as the instructor of the course, I felt as though my comments were far less confusing when presented in video and audio form and carried more weight than written comments. For example, when providing written margin comments, it is not uncommon for instructors to leave single-word comments. However, a phrase like "awkward," even if it's meaning is explained to students in class prior to students receiving feedback, provides little direction and little explanation to the student. When utilizing written feedback, adding a "because statement" to explain why the
phrase was awkward typically problematically filled the margin space next to an entire paragraph. However, due to the more conversational nature of video and audio feedback, adding those "because statements" that explain and provide direction for student revisions was something that came natural and took only a few moments to include. The inclusion of recorded audio allowed for conversational communication that is absent in most written comments. This may have been especially beneficial for the L2 students in this study, as the instructor's speaking may also serve as a model for pronunciation.

**Future Research**

While my study focused on participants whose first language was not English, future research may focus on participants whose native language is English. By replicating this study with native English speakers, it could be determined whether similar findings are true in regard to feedback preferences and academic performance or if native English speakers respond differently. Such a study may better help instructors and writing program administrators better understand the role of feedback as it relates to these two distinct student populations. Perhaps even more useful would be the pairing of L2 students with native English speakers in the same course to better isolate the variable of feedback modalities and the participants' attitudes and perceptions toward them while experiencing the same course materials and the same instructor(s). Such a focus would undoubtedly increase the generalizability of the findings and may lead to the creation of new theory.

Even though my study has demonstrated the potential for video commentary as a supplementary and/or improved feedback method for L2 students in ESOL 1010 courses at BGSU, another way future research may better explore this issue is by increasing the sample size of students studied. By simply replicating this study using several different instructors (of
varying ages, experience levels, etc.) to teach the same course would also be beneficial. By raising the number of instructors in the study, more generalized conclusions could be made about whether teaching style and feedback style impact students' perceptions of the value of video, audio, and written feedback. These findings would be paramount if paired alongside the various instructors' attitudes toward each feedback modality. Such future research could result in building a new grounded theory or expand the generalizability of the findings presented in this study and allow for comparisons to be made. To build a strong set of data, instructor interviews could also be conducted in such future research at both the beginning and end of the semester to evaluate the instructors' points of view, their thoughts on the pedagogical practices they were asked to employ (utilizing video and audio feedback and the software required to do so, etc.), and the evolution of their perceptions in regard to both throughout the semester. Instructors' past teaching experiences—specifically with audio and video—should be made note of to determine how instructor experience impacts the success of such feedback as well. In other words, future research should focus on collecting as much demographic and background information related to the study about the instructors as the students. At the close of the study, rather than rely only on survey responses (as was the case in this study) a recorded discussion group comprised of all instructors included in the study should be conducted with the lead researcher as a group discussion may result in some instructors responding and engaging with other instructors when all present in the same space. Such moments of group sharing may provide invaluable stories in addition to instructors voicing opinions that may not otherwise come to light if only surveys and written responses were used. However, educators must be mindful of the fact that increasing the number of instructors in the study demands that researchers consider the overall impact of such changes. For example, if a large number instructors are included in the study, predetermined
guidelines for how audio, video, and written feedback will be delivered to students should be discussed and agreed upon before the study begins. Additionally, I believe that instructors should all agree to use the same software to deliver their feedback to eliminate as many problematic variables as possible. I believe that agreeing upon such predetermined guidelines for feedback delivery and having continuity in the software used in the study is extremely important if we are to strive to maximize the reliability and validity of such future research.

Further research may also replicate my study through a more linguistic-based lens. While others have extensively researched the impact of corrective feedback on L2 writers (Ferris, 2005), and several studies have been conducted in regard to how audio feedback impacts language skill (see Chapter 1), no investigations to my knowledge have been made in regard to the impact video feedback has on specific issues related to grammar, language acquisition, language proficiency, the learning of phonological elements, syntax, semantics, and so on. Because language plays such a pivotal role in human interaction and behavior, the knowledge gained in regard to audio and video feedback through a linguistic-based lens would have many practical uses. For example, a specific future study may build upon this study and investigate which feedback modalities best assist students target and correct specific types of common sentence-level errors L2 writers often struggle with, such as subject-verb agreement errors, sentence fragments, run-on sentences, article use, verb tense, etc. Educators might also learn whether grammar rules and essay writing conventions are better remembered when students receive one feedback modality over another and analyze whether this varies by student. While other suggestions for future research may help make the findings of this study more generalizable, such linguistic-focused future research may lead to a more narrow understanding of when and how to utilize each feedback modalities and allow for a better understanding of
when and in which local contexts to employ such feedback. In fact, such studies could likely lead to the creation of new substantive theory related to language learning pedagogy. Such future studies could be situated within the robust scholarship on corrective feedback and may work to modernize such discussions as a result of the inclusion of audio and video feedback.

Although data collected in this study show that students were best able to use video comments to make successful revisions on their essays, further research is needed to determine if this is a generalizable trend or an isolated finding. Teacher comments play the most important role in helping students develop into independent writers after the course is completed. Researchers such as Hyland and Hyland (2006) believe that more research is needed to determine what pedagogical practices help students revise more successfully long-term (long after the writing course is completed). Hyland and Hyland (2006) are also quick to point out that research on essay writing, in general, is quite limited but specifically argue that scholars are not currently researching what practices help students learn long-term revision strategies. According to Hyland and Hyland, no literature provides the kind of guidance teachers need to be confident that their students are learning long-term revisions strategies. Hyland and Hyland specifically suggest that more studies should be conducted in regard to students' perceptions of oral conferences versus written feedback as well as the effects of such response on immediate revisions improvements and whether or not students develop the ability to revise successfully long-term. Since there have been many developments in electronic software in the previous decade since Hyland and Hyland's (2006) publication, we can take the questions these scholars put forth one decade ago and specifically work to engage in continued research to determine how audio and video feedback impact students immediate and long-term revisions.

Another important shift in focus that could be made to this study to provide an entirely
new set of data would be to move away from the concept of linking academic achievement to grades earned as is done in this study and embrace a new focus on how each modality of feedback impacts the ease of revision as well as the significance of revisions made by the students given the data on revision presented in Chapter 4. In other words, viewing revision not only as student progress toward a goal but also as academic achievement in itself could build a new substantive grounded theory in regard to the link between audio/video feedback and academic achievement and further the discussions presented in this study while working toward building more generalizable conclusions about the impact digital teacher comments have on academic achievement. By softening the more rigid view of academic achievement I employed, we may learn more about students' revision practices and their "time on task" as described in detail by Chickering and Ehrmann (1996). Rather than assessing the success or lack of success of audio and video feedback as measured by the grades students receive, Chickering and Ehrmann suggest that we may learn much about how various technologies impact how students allocate their time by shifting our focus to process rather than product when considering academic achievement. The authors write that technology can "help students learn at home . . . and students and faculty alike make better use of time when they can get access to important resources for learning without trudging to the library" (p. 4). Chickering and Ehrmann are quite optimistic that new technologies improve the learning process for students. Some two decades have passed since the publication of their research, and we now have an abundance of new resources at our fingertips to measure student engagement, students' time on task (time spent revising), and the significance and ease of revisions made. One way I believe we could measure time on task is by using software like Google Docs and conduct a study similar to the one presented here. By utilizing such software, researchers would be able to review writers entire
revision histories, which would allow them to analyze the types of revisions students made when using various modalities of teacher comments to make their changes. If an instructor chose to, they could actually login to Google Docs with the student at a predetermined time for purposes of the study and record the shared screen as the student works through the teacher's comments on screen (an audio component could also be added to this scenario in that we could hear the students' thoughts as they engage with the writing process). We have the capacity to make use of screen recording software like Jing in conjunction with Google Docs and various audio recording software to learn much about students' revision habits as researchers would be able to visually witness the level of student effort, the amount of time students spend on various revisions, and the significance of the revisions made. Finally, by shifting the focus from viewing grades as the measuring stick for academic achievement to a focus that embraces academic achievement as successful revision practices, researchers may learn more about students' perceptions in regard to various feedback modalities because researchers would have the capacity to pair recordings of students actual revision practices with survey responses (similar to those employed in this study) to obtain an abundance of data about student engagement, student motivation, feedback modalities, and the various impacts on the revision process.

Additionally, in ESOL writing courses that utilize a process-based or revision-based approach, future studies could be conducted that investigate how we may isolate students' responses to various feedback modalities in relation in relation to their enrollment in a course that embraces a process-based approach that by definition strives to improve students' writing and language skills throughout a given semester. In other words, even though I found that students did generally improve over time, the data also show that students performed the best when using video feedback regardless of the time of the semester based on the grades they
earned on essay assignments (see Chapter 4). Future researchers could focus more intently on how the order feedback modalities are presented to students matters to either verify and validate some of the results found here into more generalizable conclusions or to provide data that may disagree with my findings and build a more layered and detailed discussion.

Another area that I believe demands further research is continuing to work to determine what the appropriate length of digital video and audio feedback truly is. As discussed in earlier chapters, the Jing software I chose to use for this study provided hard-capped restrictions in regard to length, which in rare cases became problematic. This was not explicitly discussed because there were only about two cases in which I felt rushed to provide the level of feedback I felt the student needed, and there was one instance in which I had to re-record the session and increase my speaking speed to make sure the student obtained enough information to make successful revisions. However, the vast majority of the time I felt that I had plenty of time to provide feedback and there were a handful of feedback sessions where I only needed a very brief minute to provide feedback to a student given the sophistication and level of the draft I was commenting on. I believe that further research should investigate both student and teacher opinions on how the length of video and audio comments impacts teachers' workloads, students' comfort levels, students' writing ability, and students' ability to revise well. Such studies could prove invaluable to our understanding of digital feedback in writing courses and help build the substantive theory presented here into more generalizable conclusions.

Ideally, further evaluations would also investigate the implementation of a multistyle approach to feedback in the L2 writing classroom by providing video, audio, and written comments to the same group of students on several different types of assignments along with a learning style inventory. Due to the mandated assignments and localized goals of ESOL 1010
courses at BGSU, the course focuses strictly on the writing of academic-style essays. Much could be learned about the effectiveness of video and audio comments in L2 writing courses by simply replicating this study in a course where instructors have the autonomy to assign a variety of major writing assignments that do not necessarily utilize the competencies and style required to succeed at writing academic essays and have those students compose a variety of writings (in both digital and print spaces), such as blogs, storyboards, business letters, book reviews, websites, and so on. Once again, a study such as this would allow researchers to determine if video feedback would still be preferred by L2 students and whether or not the preferred feedback modality changed based on the type of writing the students engaged in. Such a study would determine how useful a multistyle approach to feedback might be outside of the academic writing classroom.

Given the discussion presented earlier in this chapter related to the digital divide and the potential difficulties implementing a multistyle approach to feedback, I believe that a dual-course study that examines students' perceptions and performance could be incredibly valuable; that is, by replicating this study in both the traditional classroom and a technology-enhanced classroom (one that includes a computer lab), researchers could study two sections of the same course (one in a computer lab where feedback is available to them during class time and one in a traditional classroom with no required technology). Scholars could determine how such access to technology during course class time impacts a number of variables and once again would build on the conversations presented in this dissertation study and possibly generate a new substantive grounded theory in regard to how access to technology impacts L2 students ability to utilize digital feedback.
Lastly, the long-term benefits of video and audio feedback should also be analyzed in future research. There is no guarantee that just because L2 students in writing courses receive digital feedback on their writing assignments in writing courses that they will continue to receive such feedback. In fact, current research on feedback (see Chapter 1) combined with students' survey responses in this study (see Chapter 3) strongly suggest that it is rather unlikely that L2 students will receive audio or video comments from their instructors in other courses as we learned this was currently true in writing courses as well. Such a disconnect in regard to how teacher comments are presented to students in ESOL writing courses versus other courses at the same campus could lead students' initial high opinions of video feedback to fade as they see and learn that other instructors and disciplines continue to rely largely (or solely) on written feedback. Future research could track student participants' perceptions toward audio and video feedback at the beginning and end of an ESOL writing course as this study did but also track how those perceptions evolve over time for at the of the students' second, third, and fourth years as undergraduate students and whether or not they found their exposure to video feedback worthwhile.

This section has outlined a multitude of possible projects that have the capacity to modify, continue, and build upon the findings presented in Chapter 3 and Chapter 4 of this dissertation study. However, these ideas for possible future research are not meant to be exhaustive as there are numerous other possibilities not explicitly listed and discussed in this chapter. Given the key results found in this study, it may be tempting for future researchers to pursue questions that further explore why video feedback appears superior to traditional modalities of feedback with the L2 students studied here. However, educators should instead look more broadly at the integration of technology in educational environments and consider
how such changes to our feedback practices may impact how educators and students view what constitutes good communication in the 21st Century (Conger, 2005). Still, student response to video feedback was overwhelmingly positive. Also, students preferred video teacher comments over audio comments and traditional written comments by a wide margin. Therefore, the fields of Rhetoric and Composition and TESOL should continue to evaluate how video feedback may impact student learning and enhance our own pedagogy in ESOL writing courses.

Perhaps even more important is the realization that studies like these provide, in many ways, a voice to the voiceless. Had I never embarked on this study, the perceptions and views of the L2 students enrolled in my ESOL 1010 courses would have remained entirely silent, and the impact of my pedagogical approach to providing feedback would have remained largely unknown or left to guesses and hypotheses based strictly on teacher observations. In other words, regardless of how effective or ineffective the implementation of audio and video feedback was in the ESOL 1010 classroom, the results of such practice would have never left my classroom. In reality, discussions about my approach would have likely started and ended with other ESOL colleagues in department meetings within a single department at a single university. Studies like the one presented here remind the reader that one of the most important endeavors of the teacher-scholar is to continue to consider how one's research informs their teaching and vice versa and to publish, discuss, conference, and share the results of our innovative practices especially in areas of research that have gone largely unexplored. I believe sharing the ways in which we as educators use digital teaching technologies to enhance student learning is now more important than ever in the increasingly digital world we live in, and it is through sharing that we can try to ensure that the value of our work is heard and celebrated.
The Future of Writing Assessment in the 21st Century: Teacher Feedback Matters

I feel that it is important to first turn a more broad eye toward writing assessment in general, including, but not exclusive to, L2 writing courses. The data in this study have muddied previous findings about L2 students' learning styles and writing assessment practices. However, in many ways, problematizing previous notions about writing assessment has always been the norm. Huot (1990) has argued that our lack of progress in understanding and agreeing upon writing assessment practices is the result of "a lack of a firm theoretical base" (p. 258). Belanoff (1991) claimed that the problem with writing assessment is that "our profession has no agreed upon definition of proficiency" (p. 58). Leki (1995) would later agree with Huot and Belanoff and add that we also assume teachers know how to assess student writing rather than explicitly discuss, train, and educate teachers how to do so. Specifically, she writes, "We make assumptions about what good writing is and assume that everyone else, including our students, know what our assumptions are" (p.45).

Why, then, decades later, is there still so much confusion about how to assess student writing? Much of it, I believe, has to do with the fact that writing assessment is a highly contextualized, localized process that speaks volumes about just how different each writing program is as we travel from campus to campus, state to state, and even country to country. Due to this fact, it unsurprising that numerous scholars have found that for decades writing instructors continue to fear, detest, and do all they can avoid the process of writing assessment and attempt to pass the responsibility to others at the university as a result of feeling unprepared for the work (Hamp-Lyons, 2003; Weigle, 2007; Yancey, 1999). Nevertheless, assessment is an unavoidable daily task for writing instructors and will remain one of the most important duties a writing teacher engages in daily (Weigle, 2007). Therefore, many have argued that writing program
administrators (WPAs) must incorporate writing assessment as a central part of their job and as a central part of teacher education within their localized writing program (Bachman and Palmer, 1996; Broad, 2003; Crusan, 2006; Hamp-Lyons, 2003; Haswell and Wyche-Smith, 1994; Huot, 2003; Lynne, 2004; White, 2001; Yancey, 1999). WPAs must realize that scholarship shows that many writing instructors have never been formally trained to teach and assess writing and Weigle (2007) has shown that even when pedagogy or introductory graduate studies courses are offered to incoming graduate assistants and new teachers who have never taught writing previously, there is usually no practical discussion of how to grade a student essay. However, there is cause for optimism. As Condon (2011) points out, "The plethora of books written by scholars within the field of Rhetoric and Composition about writing assessment over the past ten years is a strong indication that the conversation about writing assessment has reached a kind of tipping point" (p. 163). Specifically, Condon states that we have learned much in last decade, for example, such as the fact that "timed essay tests produce bad writing . . . [and] curricula that are focused on deficit and error [do not] support students' efforts to become better writers" (p. 180). But even if we are at the point at which a series of small changes has occurred in regard to the ways in which we think about writing assessment as a field, are they significant enough to cause a larger, more important changes? And more importantly, what are the changes we are hoping take hold? One such change Condon (2011) emphasizes the importance of is that we must put the students first and work to find how to better assess their writing, and he is confident that "the conversation is tipping in that direction" (p. 181).

Conclusion

My hope is that this dissertation has put students first and continued to tip the conversation in a productive way while showing how important it is to continue investigating
writing assessment through a number of different lenses. Rhetoric and Composition has the desire continue to work to understand our students and how to assess them as demonstrated by the plethora of scholarship discussed throughout this dissertation. There is no doubt that ongoing rapid advancements in technology will continue to evolve and change the ways in which writing is composed and assessed, and this supports the hypotheses of previous research that new technologies have the potential to enhance student engagement with feedback. Students' educational experiences seem to be able to be enhanced by changing the process in which feedback is provided.

In regard to the learning styles of students in writing courses, scholarship shows that many colleges may be failing to meet students' learning styles (see Chapter 1) because many educators rely too heavily upon a single mode of communication with their students. It is my hope that this study has highlighted how mismatches between teaching styles and learning styles may impact students as well as show how educators may choose to adopt a variety of technologies to better support the varying learning styles of their students. Even if the reader chooses to not pursue the option of using a multistyle approach to providing feedback to their students, Felder and Henriques (1995) have pointed out that simply working to raise awareness of learning styles is important so students know how they learn best, and Kumaravadivelu (2003) believes that by simply having students complete a learning style inventory, instructors can help writers gain personal ownership of learning while studying at the university. Thus, according to Kumaravadivelu, students will gain the confidence and the capability to continue to improve as writers beyond the writing classroom by simply having students complete a learning style inventory. I agree and believe even small-scale pedagogical changes such as these are worth consideration as the benefits of appealing to various learning styles are many, and these
pedagogical changes can likely be more easily implemented than the full incorporation of video, audio, and written feedback that a multistyle approach to feedback may require. Another small-scale change instructors may strive for is to try to give both verbal and written instructions for assignments and projects, or post visuals such as PowerPoint presentations online to supplement spoken lectures so students can review the written text at a later time. Instructors may even record the written guidelines for assignments and post them online so students have the option of listening to instructions rather than reading them to appeal to a wider net of learning styles.

I am reminded of Ferris' (2005) words in regard to the workload demands of writing teachers in the 21st century. Ferris writes, "In the case of all of these alternatives to handwritten feedback . . . the plight of the part-time college or university lecturer who may teach as many as five or six writing courses at two or more institutions without office space or office hours is rarely considered . . . [so] it may always be more convenient for hardworking writing teachers to write comments directly onto student papers than to schedule conferences, speak into a tape recorder, or sit at a computer . . . [but] it remains important to ask questions about the optimal ways to provide such feedback" (p. 41). I, like Ferris, believe we must continue to research alternative feedback methods.
REFERENCES


Conger, S. B. (2005). If there is no significant difference, why should we care. *The journal of educators online, 2*(2), 1-4.


Crook, A., Mauchline, A., Maw, S., Lawson, C., Drinkwater, R., Lundqvist, K., ... & Park, J. (2012). The use of video technology for providing feedback to students: Can it enhance the feedback experience for staff and students?. *Computers & Education, 58*(1), 386-396.


APPENDIX A. WEEK 1 STUDENT SURVEY

Feedback Preferences for Writing Assignments—Student Survey

What is your name? _____________________________________________

How old are you? ______

Are you male or female? (circle your answer)  Male  Female

What country were you born in? ______________________________

What is your native language? ______________________________

Do you own your own computer or tablet? (Yes/No) ______

How many times have you had a class anywhere that required you to listen to an audio file online? ______

How many times have you had a class anywhere that required you to watch videos online? ______

How many times have you had a class anywhere that used hand written or typed feedback (where the teacher wrote/typed comments on your essay about what changes you needed to make)? ______

How many times have you had a class anywhere that used audio feedback (where the teacher recorded himself/herself speaking about what changes you needed to make)? ______

How many times have you had a class anywhere that used video feedback (where the teacher made a video discussing the changes you needed to make on YouTube, etc.)? ______

How many times have you had a class anywhere that required you to use a computer for homework? ______

Circle all the types of feedback you have previously received from a writing teacher:

Video Comments  Audio Comments  Written Comments
For the questions below, please write a 1, 2, 4, or 5 in the blank space to the left of the question that matches your answer.
(Example: Writing a "1" in the blank space would mean that your answer to the question is: "Not at All Understandable")

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<td>Understandable</td>
<td>Extremely Understandable</td>
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1. _____ How well do you think you could understand written feedback (comments from your instructor to help you improve your writing) from your ESOL 1010 instructor this semester?
2. _____ How well do you think you could understand audio feedback from your ESOL 1010 instructor this semester?
3. _____ How well do you think you could understand video feedback from your ESOL 1010 instructor this semester?

For the questions below, please write a 1, 2, 4, or 5 in the blank space to the left of the question that matches your answer.
(Example: Writing a "1" in the blank space would mean that your answer to the question is: "Not at All Helpful")

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4. _____ How helpful do you think receiving written feedback from your ESOL 1010 instructor could be semester?
5. _____ How helpful do you think receiving audio feedback from your ESOL 1010 instructor could be semester?
6. _____ How helpful do you think receiving video feedback from your ESOL 1010 instructor could be semester?
For the questions below, please write a 1, 2, 4, or 5 in the blank space to the left of the question that matches your answer.
(Example: Writing a "1" in the blank space would mean that your answer to the question is: "Not at All Valuable")

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7. _____ How valuable do you think written feedback could be this semester in helping you improve the quality of your writing?
8. _____ How valuable do you think audio feedback could be this semester in helping you improve the quality of your writing?
9. _____ How valuable do you think video feedback could be this semester in helping you improve the quality of your writing?
10. If your ESOL 1010 instructor gave you the choice of receiving feedback on your essays for this course with either written, audio, or video feedback, which would you choose? (you may circle more than one choice)

Written Audio Video

11. Please write a few sentences that explain why you prefer the feedback method/methods you just circled. Do you prefer different feedback styles on first drafts than final drafts? Why?
APPENDIX B. WEEK 15 STUDENT SURVEY

Feedback Preferences for Writing Assignments—Student Survey

What is your name? ________________________________________________

For the questions below, please write a 1, 2, 4, or 5 in the blank space to the left of the question that matches your answer.

(Example: Writing a "1" in the blank space would mean that your answer to the question is: "Not at All Understandable")

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12. _____ How well were you able to understand written feedback (comments from your instructor to help you improve your writing) from your ESOL 1010 instructor this semester?

13. _____ How well were you able to understand audio feedback from your ESOL 1010 instructor this semester?

14. _____ How well were you able to understand video feedback from your ESOL 1010 instructor this semester?

For the questions below, please write a 1, 2, 4, or 5 in the blank space to the left of the question that matches your answer.

(Example: Writing a "1" in the blank space would mean that your answer to the question is: "Not at All Helpful")

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15. _____ How helpful was receiving written feedback from your ESOL 1010 instructor this semester?
16. _____ How helpful was receiving audio feedback from your ESOL 1010 instructor this semester?

17. _____ How helpful was receiving video feedback from your ESOL 1010 instructor this semester?

For the questions below, please write a 1, 2, 4, or 5 in the blank space to the left of the question that matches your answer.

(Example: Writing a "1" in the blank space would mean that your answer to the question is: "Not at All Valuable")

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18. _____ How valuable was using written feedback this semester in helping you improve the quality of your writing?

19. _____ How valuable was using written feedback this semester in helping you improve the quality of your writing?

20. _____ How valuable was using written feedback this semester in helping you improve the quality of your writing?

21. If instructors in future courses at BGSU give you the choice of receiving feedback on your essays with either written, audio, or video feedback, which would you choose (circle only one choice)?

   Written     Audio     Video

22. Please write a few sentences that explain why you prefer the feedback method/methods you just circled. Do you prefer different feedback styles on first drafts than final drafts? Why?
23. Which feedback style would you prefer if you were writing for a course that was taught in your native language instead of English? (circle only one choice)

Written  Audio  Video

24. Did you feel that written feedback in ESOL 1010 this semester . . . (circle all that you think are true):

- Directly improved your grade
- Directly lowered your grade
- Made you confused
- Made you less confused
- Made revisions easier
- Made revisions more difficult
- Made your instructor seem more friendly
- Made your instructor seem less friendly
25. Did you feel that audio feedback in ESOL 1010 this semester . . . (circle all that you think are true):
   
   o Directly improved your grade
   o Directly lowered your grade
   o Made you confused
   o Made you less confused
   o Made revisions easier
   o Made revisions more difficult
   o Made your instructor seem more friendly
   o Made your instructor seem less friendly
   o Is there anything else you think audio feedback helped you or did not help you with? (Please Explain)

26. Did you feel that video feedback in ESOL 1010 this semester . . . (circle all that you think are true):
   
   o Directly improved your grade
   o Directly lowered your grade
   o Made you confused
o Made you less confused
o Made revisions easier
o Made revisions more difficult
o Made your instructor seem more friendly
o Made your instructor seem less friendly
o Is there anything else you think video feedback helped you or did not help you with?

(Please Explain)

- ________________________________________________________________
  ________________________________________________________________

27. Which feedback style do you think resulted in your best essay this semester in ESOL 1010 (circle only one choice)?

  Written  Audio  Video

28. Which feedback style do you think resulted in your worst essay this semester in ESOL 1010 (circle only one choice)?

  Written  Audio  Video
HUMAN SUBJECTS REVIEW BOARD
Application for Approval of Research Involving Human Subjects

- Complete electronically and use the most current form.
- Applications judged to be incomplete or vague will be returned to the Principal Investigator for revision.
- Submission lead times - For Exempt Review projects – submit at least 2 weeks before your planned start date. For Expedited Review projects – submit at least 6 weeks before your planned start of recruiting and data collection. For Full Board projects – submit at least 2 months before your planned start of recruiting and data collection.

I. Type of Review Being Requested: (Select only one of the following options: Exempt, Expedited, Full Board)

**Exempt Review** (If exempt, select the most appropriate category below.)

- **Exempt 1:** Research in an educational setting, involving normal educational practices.

- **Exempt 2:** Tests, surveys, interviews, or observation when information is recorded anonymously or there is no risk (criminal, civil, financial, reputation, etc.) to subjects. Subjects must be adults.

- **Exempt 3:** Tests, surveys, interviews, or observation of public officials or candidates, or when Federal statues requires confidentiality.

- **Exempt 4:** Use of existing data if the sources are publically available or if data are recorded anonymously by the investigator.

- **Exempt 5:** Projects requiring approval of Agency heads and evaluate aspects of public services programs.

- **Exempt 6:** Food quality evaluation and consumer acceptance studies.

**Expedited Review** (If expedited, select the most appropriate category below.)

- **Expedited 1:** Clinical studies of drugs or medical devices when special conditions are met.
Expedited 2: Only collection of blood. Amount and frequency is specified in regulations.

Expedited 3: Noninvasive means of collecting biological specimens.

Expedited 4: Noninvasive means of data collection routinely employed in clinical practice (e.g., moderate exercise, physical sensors applied to body, body composition assessment, etc.).

Expedited 5: Use of existing data that were collected for non-research purposes (e.g., medical treatment). Some research in this category may be exempt under Exempt 4.

Expedited 6: Collection of data from voice, video, image recordings made for research purposes.

Expedited 7: Research using surveys, interviews, focus groups, program evaluation, communication, etc. Some research in this category may be exempt under Exempt 2.

Full Board Review

Full Board: Research that does not fall into the above categories, is more than minimal risk to subjects, or is indicated as requiring Full Board in sections IV and VI of the application below.

Iia. General Information:

Name of applicant (Principal Investigator): Adam Sprague

Date: 4/7/15

The Principal Investigator is (check one):

- Faculty
- BGSU Staff
- Undergraduate Student
- Graduate Student

- Off-campus applicant (check this box if you are not affiliated with BGSU but propose to conduct research involving BGSU Faculty, Staff, or Students)

Department or Division: English

Campus Phone: n/a
E-mail:  awsprag@bgsu.edu  Fax:  n/a

Have You Completed BGSU Human Subjects Training?

☑ Yes (Office of Research Compliance will confirm training date.)
☐ No (This application will not be reviewed. See HSRB website for training information.)

Title of the Proposed Research Project:
Analyzing the Feedback Preferences and Learning Styles of Second-Language Students in ESOL Writing Courses at Bowling Green State University

Names of Other Students or Staff Associated with the Project (Student PIs note – Do not include your advisor for this research project here):  n/a

Have you requested, or do you plan to request, external support for this project?

☐ yes  ☑ no

If yes, external Funding Agency or Source:

Ilb. If you are a BGSU student, please provide the following information:

This research is for:  ☐ Thesis  ☑ Dissertation  ☐ Class Project  ☐ Other

Advisor's Name (This is the advisor for this research project):  Lee Nickoson

Department or Division:  English  Phone:  419-372-7556  Fax:  n/a
E-mail: leenick@bgsu.edu

Has Advisor Completed BGSU Human Subjects Training?

☑ Yes (Office of Research Compliance will confirm training date.)
☐ No (This application will not be reviewed. See HSRB website for training information.)
III. Information on Projects Using Pre-existing Data

(Skip Section III if this project does NOT use pre-existing data. Pre-existing data includes retrospective medical chart reviews, public data sets, etc. Sometimes it is referred to as secondary data or archival data.) Some projects involving the use of pre-existing data may not require review by the HSRB. However – it is the HSRB’s responsibility to make that determination – not the researcher’s.

NOTE: If you are obtaining medically-related information from a “Covered Entity” (a health plan, health care clearinghouse or a health care provider who bills health insurers – e.g., hospitals, doctor’s offices, dentists, the BGSU Student Health Service, the BGSU Speech and Hearing Clinic, the BGSU Psychological Services Center), the HIPAA Privacy Rule may apply.

a. Name(s) of existing data set(s) [Include any ancillary data sets you might be linking the main data set(s) to]:


b. Source(s) of existing data set(s):


c. Please provide a brief description of the content of the data set(s):


d. When you obtain the data, will the individual records be anonymous or will they have identifiers/codes attached?


Anonymous (i.e., no identifiers or codes attached to any records in any of the listed data sets)
(If you indicated “anonymous” and your project also involves direct data collection, please go to section III and complete the rest of the application. Otherwise, please go to and complete sections VIII.a, VIII.b, and X.)

☐ Identifiers/codes attached (examples would include, but not be limited to, record numbers, subject numbers, case numbers, etc.)

d.1 If the records have identifiers or codes attached, can you readily ascertain the identity of individuals to whom the data pertain (e.g., through use of a key that links identifiers with identities; linking to other files that allow individual identities to be discerned)?

☐ Yes, I can ascertain the identity of the individuals.

Please explain in the box below how you will protect the confidentiality of subjects. The Human Subjects Review Board is concerned about 2 dimensions of confidentiality: (1) that the researcher has legitimate access to the records, i.e., the records are not protected by any special confidentiality conditions, and (2) that the researcher will not reveal individual identities unless permission has been granted to do so.

☐ No, I cannot readily ascertain the identity of the individuals.

Please describe in the box below, the provisions in place that will not allow you to ascertain identities (e.g., key to decipher the code/identifier has been destroyed, agreement between researcher and key holder prohibiting the release of the key).

(If you answered “no” and your project also involves direct data collection, please go to section III and complete the rest of the application.)
Otherwise, please go to and complete sections IV (as appropriate), VIIIa, VIIIb, and X.)

e. Are the data from a public data set? (A public data set is data available to any member of the public through a library, public archive or the Freedom of Information Act. Data obtained from private companies, hospital records, agency membership lists or similar sources are not usually public data)

☐ Yes

Are you requesting permission to conduct multiple research projects with these data?

☐ Yes ☐ No

(If you answered “Yes” and your project also involves direct data collection, please go to section III and complete the rest of the application. Otherwise, please go to and complete sections VIII.a, VIII.b and X.)

☐ No (if no, please answer the following questions)

f. If you are obtaining access to non-public information, please explain in the box below how you will obtain access to the information (e.g., permission from the CEO, permission from the Board of Education). Note: a condition for approval will be written documentation of this permission – this can be an email from the relevant authority.


g. Before the data were collected, did respondents give their permission for the information to be used for research purposes? ☐ Yes ☐ No

h. Are you recording the data in a manner that will allow you to identify subjects, either directly or through identifiers linked to the subjects?

☐ Yes ☐ No
i. If your project also involves direct data collection, please continue completing the rest of the application. Otherwise, please go to and complete sections IV (as appropriate), VIII.a, VIII.b, and X.

**IV. General Project Characteristics:** Does the research involve any of the following? (If the response to any of the following is “yes,” provide a justification and/or rationale in the box provided below)

<table>
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<th>Yes</th>
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| □   | ☒  | a. Deception of subjects  
     |     | (if “yes,” this application will go to the full Board for review). |
| □   | ☒  | b. Shock or other forms of punishment  
     |     | (if “yes,” this application will go to the full Board for review). |
| □   | ☒  | c. Sexually explicit materials or questions |
| □   | ☒  | d. Handling of money or other valuable commodities |
| □   | ☒  | e. Extraction of blood or other bodily fluids |
| □   | ☒  | f. Questions about drug and/or alcohol use |
| □   | ☒  | g. Questions about sexual orientation, sexual experience, or sexual abuse |
| □   | ☒  | h. Purposeful creation of anxiety |
| □   | ☒  | i. Any procedure that might be viewed as an invasion of privacy |
| □   | ☒  | j. Physical exercise or stress |
| □   | ☒  | k. Administration of substances (food, drugs, etc.) to subjects |
| □   | ☒  | l. Any procedure that might place subjects at risk (e.g., disclosure of criminal activity). |
| □   | ☒  | m. Systematic selection or exclusion of any group. This includes the selection or exclusion of any group based on age, gender, race, ethnicity, etc. |

**V. HIPAA:** If you answer “Yes” to any of the following questions, your project is subject to HIPAA and you must complete the HIPAA Supplement (available online at www.bgsu.edu/offices/orc/hsrb).
a. Will health information (information relating to the past, present, or future physical or mental health or condition of an individual) be obtained from a covered entity (a health plan, health care clearinghouse or a health care provider who bills health insurers – e.g., hospitals, doctor’s offices, dentists, the BGSU Student Health Service, the BGSU Speech and Hearing Clinic, the BGSU Psychological Services Center)?

b. Will the study involve the provision of health care in a covered entity?

b.2 (Complete this only if you answered “Yes” to IV.b – otherwise, skip this item). If the study involves the provision of health care, will a health insurer or billing agency be contacted for billing or eligibility?

VI. Subject Information: (If the response to any of the following is "yes," the researcher should be sure to address any special needs of the potential subjects in the informed consent process. For example, if subjects are over the age of 65, then it may be appropriate to use a larger font in all correspondence with subjects to ensure readability.)

Does the research involve subjects from any of the following categories?

a. Under 18 years of age included in the target population

b. Over 65 years of age as the target population

c. Persons with a physical or mental disability as the target population

d. Economically or educationally disadvantaged as the target population.

e. Unable to provide their own legal informed consent
(If “yes” and the subjects are not children, this application will go to the full Board for review).

☐ ☒ f. Pregnant females as the target population
   
   (If “yes” this application will go to the full Board for review).

☐ ☒ g. Victims of crimes or other traumatic experiences as the target population

☐ ☒ h. Individuals in institutions (e.g., prisons, nursing homes, halfway houses)
   
   (If “yes” this application will go to the full Board for review).

VII. Risks and Benefits: (Note: the HSRB retains final authority for determining risk status of a project)

Yes ☐ No ☒ Please answer the following questions about the research.

☐ ☒ a. In your opinion, does the research involve more than minimal risk to subjects? ("Minimal risk" means that "the risks of harm anticipated in the proposed research are not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.") If the answer is "yes," explain in the box below and provide an explanation of the benefits of the research to the subjects and to society.)

☐ ☒ b. Are any emergencies or adverse reactions (physical, psychological, social, legal, or emotional) probable as a result of the research? (If "yes," then explain the measures to be taken in case of emergency in the box below.)

☐ ☒ c. Will participation in this research result in any appreciable negative change in the subject’s emotional state? (If “yes,” explain the nature of the change and the process for assisting subjects in the box provided.)
VIII. **Project Description:** (Please provide as much information as you feel will adequately answer the following questions.)

a. What are you going to study? What is (are) the research question(s) to be answered / hypotheses to be tested?

This study will analyze the feedback preferences of students enrolled in one section of ESOL 1010 at Bowling Green State University during the fall 2015 semester. As their instructor, I will provide students with written, audio, and video feedback throughout the semester on written essay assignments. The study will also determine if a participant's preferred feedback method matches their preferred learning style. Finally, the study will seek to determine what impact, if any, each feedback method has on student performance as measured by the grade received on essay assignments during the fall 2015 semester.

In sum, this study will answer the following three research questions:

1. Do students enrolled in ESOL 1010 courses at BGSU prefer receiving audio, written, or video feedback from their instructor on essay assignments?

2. How does each student's preference match their identified learning style as tested by a learning style inventory survey?

3. Which, if any, feedback method (audio, written, or video) affords each student the greatest/lowest chance for success as measured by the final scores received on essay assignments during the fall 2015 semester in the two sections of ESOL 1010 courses I instructed?

b. Discuss the benefit(s) of this study. Why is this study important? (provide scholarly support) Include a discussion of benefits to individual participants as well as to society as a whole. **NOTE:** Compensation or incentives (e.g., gift cards,
First, proponents of learning style assessment contend that optimal instruction requires diagnosing individuals’ learning styles and tailoring instruction accordingly (Cavanaugh, Hodges, and Stewart). The learning style-based approach has acquired great support within the education field, and it is frequently encountered at levels ranging from kindergarten to graduate school. However, others have stated that there is no adequate evidence base to justify incorporating learning-style based assessments into general educational practice (Pashler, McDaniel, and Rohrer & Bjork). Additionally, scholars have pointed to the fact that there is no significant published research that describes the learning style preferences of non-native English speakers studying in the United States (Reid). This study will explore how students in ESOL 1010 prefer feedback via a method that aligns with their individual learning style. The results of this study have significance locally in regard to BGSU in that future ESOL instructors could gain significant insight into whether or not students prefer this approach and if providing feedback in a way that matches each student's preferences results in higher student achievement. In sum, the results of this study can work to determine the validity of learning style approaches in regard to assessment practices in ESOL writing courses and comment on whether or not such practices should continue to be espoused and funded within university writing programs.

Secondly, the results of this study will provide insight to students, instructors, and members of the field into whether or not ESOL instructors should work to assess student writing through a medium that each individual student prefers or to simply provide each student with the same method of feedback/assessment. Individualized assessment practices are not the norm in the majority of writing courses in the United States, and there is little scholarship published on the subject. Thus, the results of this study could contribute significantly to scholarly discussions of writing assessment practices should the results show individualized assessment methods result in greater/lower student achievement.

Additionally, those that do choose to participate in the study will benefit directly due to the fact that they will better understand how they learn best. This may help them academically as well as in the workplace.

Lastly, little is known about the impact digital assessment practices have on non-native English speakers when working on essay assignments in the United States. By working with a specific group of students, this study will begin to comment on whether or not digital feedbacking methods are preferred by ESOL 1010 students and, more importantly, whether digital forms of writing assessment afford these students with a higher or lower achievement rate on their essay assignments.
c. Are there any risks associated with this study? If so, explain how you will minimize the risks to subjects.

The risk of participation is no greater than that experienced in daily life.

d. Who will be your subjects?

My subjects will be students enrolled in one section of ESOL 1010 at Bowling Green State University during the fall 2015 semester. 16 students would be the maximum number of students in the study due to the enrollment cap of the course.

e. List the maximum number of subjects you hope to enroll.

(Recruiting is not enrollment – you will likely recruit more individuals than will be enrolled in the project. Also, factor in the possibility of withdrawals, which may require enrolling of additional subjects in order to achieve your desired sample size. If, during the course of the project, you need to increase the number of subjects to be enrolled, you must request Board approval for the increase.)

16. This is the current cap on student enrollment in ESOL 1010.

f. How will you recruit your subjects? Please describe the method(s) you will use to recruit (examples include via telephone, mailings, sign-up sheets, etc.). Please include recruitment letters, scripts, sign-up sheets as appropriate with the application.

Subjects will be recruited on a volunteer-basis during the first week of the fall 2015 semester, and only students enrolled in the section of ESOL 1010 taught by myself will be recruited. I will describe the study to my class by first reading the oral script included with this application during the first week of the fall 2015 semester. As I read the script to my students, I will stress that participation is voluntary as well as answer any questions the students may have about the study. It will be made clear to all students in the course that participation will have no impact on the students’ standing in the course. It will be explained that whether the student participates or does not, each student will be assessed in the same way and be responsible for the same
g. Describe the process you will use to seek informed consent from the subjects (Example – provide consent document to potential participants, allow them to read over the information, ask them if they have any questions, answer questions to their satisfaction, then request them to sign the consent document). (See IRBNet library for consent document skeleton.)

Once I have read the oral script and answered any questions my students have about the study, I will leave the room and have my project advisor, Dr. Lee Nickoson, collect the consent documents from my students. Before I leave the room, I will allow my students to read the information on the consent form in detail in class. Dr. Lee Nickoson will also be available to answer any final questions about the study once I have left the room as she is my project advisor for the study. Dr. Lee Nickoson will then request they sign the consent document. Dr. Lee Nickoson will keep the documents in a locked safe to ensure students' privacy. Additionally, this will ensure that I will not have any knowledge as to which students accept or decline participation in the study. This means that all students will complete the three surveys, which is typical of what would be done in a classroom environment.

The consent document has been included with the application.

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Yes   No
❑   ❑  g.2. Are you having your participants **physically sign hard copies** of consent/assent form(s)?
If "No," you are requesting a waiver of written consent. Please select one of the justifications below.

☐ That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality.

☐ That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

Please indicate how you will document consent in the box below.

(For example, in an electronic survey, clicking the next button indicates consent to participate.)

Survey participants will be provided with a hard copy of the informed consent document to sign. Hard copies of this document will be stored in a locked safe at my home in Bowling Green, Ohio.

h. If deception or emotional or physical stress is involved, subjects must be debriefed about the purposes, consequences, and benefits of the research and given information on procedures they can follow or resources that are available to them to help them handle the stress. Please include a copy of all debriefing materials, if applicable.

Debriefing form: ☐ Yes ☑ No

i. Explain in the box below the procedures you will follow to protect the confidentiality of your subjects. Include considerations associated with data and/or consent form collection and storage, and dissemination of results. Explain whether or not the study is anonymous. (Note: It is not always necessary to protect the confidentiality of your subjects, but they must be informed if you plan to quote them directly or reveal their identities in any way.)

Names of participants will be collected during the survey only for data collection purposes. The names will allow me to match survey results with grade results after the course has been completed and final grades have been reported. The names of the participants will be changed to maintain confidentiality in all published results. Electronic data will be stored on a password-protected harddrive to which only I will have access. Additionally, paper copies of all
signed consent forms will be kept in a locked safe with my project advisor, Dr. Lee Nickson, prior to final grade submissions. This will ensure absolute confidentiality of my subjects and eliminate any risk participants may have. In sum, participants’ confidentiality is entirely protected unless a security breach would occur in regard to my harddrive or my safe at home.

j. Describe what subjects will be asked to do or have done to them from the time they are first contacted about the study until their participation in the study ends. Note – a summary of this information should be included in information provided to the subjects as part of the consent process.

The study will take place only during the fall 2015 semester in the two sections of ESOL 1010 for which I am the instructor of record.

Survey subjects will be asked to complete two hardcopy surveys in the first week of class during the fall 2015 semester. They will be asked to return the surveys to me within one week, and I will then place the surveys in a locked safe at my home.

Next, all students (both participants in the study as well as the other students in the course) will then complete essay assignments as they normally would in an ESOL 1010 course. Throughout the semester, all students (both participant and non-participant students) will receive written, audio, and video feedback on their essay assignments.

Participants will then complete a third hardcopy survey during week 15 of the fall 2015 semester. Again, they will then be asked to return the surveys to me, and I will place the surveys in a locked safe at my home. I will directly distribute each survey to the student participants at the beginning of class that week. Students will have one week to complete each survey and will be asked to return the survey to me in person either in my office or at the time our class meets. Each survey will take between ten and twenty minutes to complete. After the third and final survey, the participants will have no other action requested of them.

In sum, each participant will be asked to complete three surveys--each between 10 and 20 minutes in length. All other activities they engage in during the course of the semester are standard, non-unique tasks that are regularly delegated to students of ESOL 1010 courses.
IX. **Consent Form Checklist:** If you are using an informed consent document, you must use the checklist below to check off the required information. Need help with your consent document? Click [here](#) for the consent document skeleton.

- The consent document is on BGSU or departmental letterhead.
- Stated the purpose of the study.
- Stated the benefits of this project (to your field of study and to participants).
- Stated the risks of participation. If there are none, you can indicate that the “risk of participation is no greater than that experienced in daily life”.
- An explain for how confidentiality will be protected has been provided. For example: Where will the data will be stored, and who will have access to the data?
- Indicated that participation in the study is voluntary.
- Indicated that participants are free to withdraw at any time.
- Indicated how much time participation will take.
- Informed participants that deciding to participate or not will not impact any relationship they may have with BGSU.
- Provided the contact information for the PI (phone and email) regarding questions about the study.
- If the PI is a student, provided the contact information for the Advisor (phone and email) regarding questions about the study.
- Provided the contact information for the HSRB (419-372-7716 and hsrb@bgsu.edu) regarding questions about participant rights.
- “Anonymous” or “Confidential” are used correctly.
- Consent/Assent document is at an appropriate reading level. You can use the Flesch/Kincaid test in Microsoft Word to test the reading level.
- If there is any chance that participants could be under 18, indicated that participants must be at least 18 years old to participate in the study.
- Changed all “I understand” phrases to “I have been informed”.
- Statements about accidental injury and unforeseen risk have been removed.
- Acronyms have been spelled out.
- If the study is online, informed participants to clear their internet browser and page history.
- If requesting a waiver of written consent, indicated how consent will be documented. For example, “Completing and returning the survey indicates consent to participate.”
X. By electronically signing this application package in IRBNet, I certify that:

1. The information provided in this application is accurate and complete.
2. I have the ultimate responsibility for the protection of the rights and welfare of human subjects and adherence to any study-specific requirements imposed by the HSRB.
3. I will comply with all HSRB and BGSU policies and procedures, as well as with all applicable Federal, State and local laws and regulations regarding the protection of human subjects in research.
4. I agree to the following:
   • I accept responsibility for the scientific and ethical conduct of this research study
   • I will obtain HSRB approval before amending or altering the research protocol or implementing changes in the approved consent documents or recruitment procedures
   • I will immediately report to the HSRB any serious adverse events and/or unanticipated effects on subjects which may occur as a result of this study
   • I will train study personnel in the proper conduct of human subjects research
   • I will complete and return the Continuing Review form when requested to do so by the HSRB
Hello,

My name is Adam Sprague, and I am a PhD student at Bowling Green State University in the English Department. I am also your teacher in ESOL 1010. This semester I am conducting a study to find out if ESOL 1010 students prefer written, audio, or video feedback on their essay assignments. The research project will also find out what types of learning styles students in ESOL 1010 have.

The study will take place this semester. All students in this course will be asked to complete three surveys this semester. The first two surveys will be given to you during the first week of class. The last survey will be given to you during the fifteenth week of the semester.

You must sign a consent form indicating your willingness to participate and the permission to use your data for research purposes. Your real name will not be used in any published results, but your answers will.

I will now answer any questions you have about the study or the consent document at this time.

I am going to hand out the consent form now. Remember, you must sign this if you want to participate in the study. I will leave the room once the consent forms have been handed out, but my project advisor, Dr. Lee Nickoson, is here to answer any final questions you have about the study. Once you are done with the form, please give the form to Lee.

I will now pass out the consent document that you must sign if you want to participate in the study this semester.

Adam Sprague
English Department
Bowling Green State University
Bowling Green, OH 43402
APPENDIX E. HSRB INFORMED CONSENT

Informed Consent for Students:

“Analyzing the Feedback Preferences and Learning Styles of Second-Language Students in ESOL Writing Courses at Bowling Green State University”

Introduction and Background Information

You are invited to participate in a research study. The study is being conducted by Adam Sprague from Bowling Green State University, Department of English. Your participation in the study is completely voluntary.

Purpose

The purpose of this research study is to examine whether ESOL 1010 students prefer audio, video, or written feedback from their instructors on writing assignments. The study will also determine if those preferences match students' learning styles. The results of this study should help instructors better help ESOL students on writing assignments in the future.

Your participation in this study means that you consent to allow the research team to use your survey answers for research purposes.

Procedures

During the fall 2015 semester of ESOL 1010, I will provide three surveys to all students in the course. The surveys should each take ten to twenty minutes to complete. The first two surveys will be provided to you during the first week of classes, and the last survey will be given to you during the fifteenth week of the semester. These surveys will ask you questions about how you learn and the types of feedback you prefer on writing assignments.

By signing this consent form, you agree to participate in the study and allow the research team to use your survey answers for research purposes.
You will not be contacted again once the last survey has been completed.

**Potential Risks**

There are no expected risks associated with this study. Any risk of participation is no greater than what happens in daily life.

**Benefits**

This study may benefit you as it will help you understand how you learn best, and the data gathered in this study could work to help instructors learn more about how to improve students’ grades and attitudes toward ESOL writing courses.

**Confidentiality**

Although absolute confidentiality cannot be guaranteed, confidentiality will be protected to the extent permitted by law. Participants must be 18 years of age or older. Signing of this consent form indicates your consent to participate. The data collected from the surveys will be password-protected to keep your responses secure; however, there is risk that confidentiality could be breached.

All signed consent forms will be kept in a locked safe. Only members of the research team will have access to the information you provide, and your identity will never be revealed in any published results unless you specifically request identification.

**Voluntary Participation**

Your participation in this research study is voluntary. You are free to stop participating at any time without penalty. Your participation will have no impact on your grade in the course or your relationship with your instructor. This will not impact your relationship to Bowling Green State University in any way.

**Research Subject’s Rights and Contact Persons**
You acknowledge that all your present questions have been answered in language you can understand and all future questions will be treated in the same manner. If you have any questions about the study, please contact Adam Sprague by email at awsprag@bgsu.edu. You may also contact Dr. Lee Nickoson, my project advisor, via email at leenick@bgsu.edu.

If you have questions about the conduct of this study or your rights as a research participant, you may contact the Chair of Bowling Green State University’s Human Subject Review Board at 419-372-7716 or send an email to hsrb@bgsu.edu.

**Consent**

By signing and submitting your consent form, you indicate that you have read and have been informed of the above information and hereby consent to voluntarily participate in this study. You also agree that you have been given a copy of the consent form.

Informed Consent for Student:

Date: 

Signed:

_____ I agree to respond to the surveys
APPENDIX F. HSRB EXEMPT STATUS CONFIRMATION LETTER

DATE: April 9, 2015

TO: Adam Sprague
FROM: Bowling Green State University Human Subjects Review Board

PROJECT TITLE: [714436-1] Analyzing the Feedback Preferences and Learning Styles of Second-Language Students in ESOL Writing Courses at Bowling Green State University

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: April 9, 2015

REVIEW CATEGORY: Exemption category # 1

Thank you for your submission of New Project materials for this project. The Bowling Green State University Human Subjects Review Board has determined this project is exempt from IRB review according to federal regulations AND that the proposed research has met the principles outlined in the Belmont Report. You may now begin the research activities.

Comment: In the recruitment script you may want to mention the time it will take potential participants to complete the surveys.

Note that an amendment may not be made to exempt research because of the possibility that proposed changes may change the research in such a way that it is no longer meets the criteria for exemption. A new application must be submitted and reviewed prior to modifying the research activity, unless the researcher believes that the change must be made to prevent harm to participants. In these cases, the Office of Research Compliance must be notified as soon as practicable.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact Kristin Hagemyer at 419-372-7716 or khagemy@bgsu.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Bowling Green State University Human Subjects Review Board's records.