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Postsecondary Online Students' Preferences for Instructor Feedback

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This is to certify that the doctoral dissertation by

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Walden University
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Abstract

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BA, Mercyhurst University, 1985

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Abstract

Misalignment between student preferences and instructor assumptions regarding feedback may impede student learning. Researchers have investigated postsecondary students' preferences for types of instructor feedback including written, audio, and video. However, postsecondary online students' preferences have not been explored in a large-sample study. This sequential explanatory mixed-methods study was conducted to describe postsecondary online students' preferences and the reasons for those preferences. Vygotsky's social-constructivist theory was used to frame instructor feedback as a scaffolding tool to promote self-regulation in student writing. A survey containing quantitative and qualitative questions was used to collect 93 responses from undergraduate and graduate students attending a large private online university; data collection also included interviews with a subsample of 4 volunteer participants who were selected using maximum variation sampling according to their degree program. Quantitative data were analyzed using descriptive frequencies; qualitative data were analyzed for emerging themes. Findings indicated that students preferred proximal, detailed, supportive feedback. Students' preferences were based on the desire to enhance their writing skills and understand point deductions assessed by instructors. Implications for social change include increasing instructor awareness of students' preferences and enhancing collaboration in the feedback process to promote writing skill development and improve academic outcomes among postsecondary students, especially those matriculated in online programs.

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Dedication

To my parents, Frank and Claire Gredler, for their steadfast love and unwavering support for their children's education. To my daughters, Olivia and Isabel, may you realize your dreams with the help of a good education.

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I thank my committee members, Dr. Cheryl Keen and Dr. Tina Dawson, for their support. Dr. Keen taught me the importance of suggestive feedback that empowers writers to find their own answers. Dr. Dawson's expertise in quantitative and qualitative methods helped me shape a respectable study. I was fortunate to have committee members who worked well together and who served as excellent role models for my professional development. Thanks also to Dr. Gary Lacy, who provided additional feedback to ensure the quality of my study. A special thanks to my friends and colleagues, Jeff Zuckerman and Bill Levine, who provided support when I needed it most.

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Chapter 1: Introduction to the Study

Researchers have explored postsecondary students' preferences for various types of instructor feedback including written, audio recorded, and video recorded (Bilbro, Iluzada, & Clark, 2013; Crews & Wilkinson, 2010; Ice, Swan, Diaz, Kupczynski, & Swan-Dagen, 2010; Silva, 2012). However, most of the research has been done with participants attending brick-and-mortar institutions. Online students' preferences have not been adequately explored (Budge, 2011; Ferguson, 2011). Several researchers affirmed the importance of instructor feedback to student learning in the postsecondary setting (Carless, 2006; Duncan, 2007; Ferguson, 2011; Johnson & Cooke, 2015; McVey, 2008; Mirzaee & Hasrati, 2014; Mulliner & Tucker, 2015; Poulos & Mahony, 2008; Rae & Cochrane, 2008; Riddell, 2015; Van der Kleij, Feskens, & Eggen, 2015; Weaver, 2006). Carless (2006) noted that instructor feedback could undermine learning if the tone and content are not perceived by students to be supportive and helpful. Schulz (2001) argued that discrepancies in belief systems between teachers and students could disrupt the learning process. Ferguson (2011) acknowledged the occasional dissatisfaction reported by students regarding feedback and asserted that instructors' understanding of students' preferences is essential to the learning process. Schulz (2001) agreed that instructors should explore their students' feedback preferences and should address conflicts that could impede learning. Smith (2008) insisted that instructors need not strive to please their students; however, Smith acknowledged that instructors can increase the likelihood of student learning by using strategies that enhance student engagement such as demonstrating awareness of students' feedback preferences.

Online students often do not have the opportunity to attend class face to face, and online instructors have fewer options for providing feedback due to limited interaction possibilities in the virtual setting (Wolsey, 2008). Wolsey (2008) asserted that the limitations of the online learning platform reinforce the need for effective text-based feedback on students' writing projects. Cavanaugh and Song (2014) observed that online instructors' lack of familiarity with audio technology and lack of access to training may limit their ability to provide this type of feedback despite students' apparent preference for audio feedback used in conjunction with written feedback. Cavanaugh and Song also expressed concern that audio feedback may be "brutally time consuming" (p. 130) for instructors, given their lack of experience with this method and demanding volume of papers to grade. Riddell (2015) echoed the concern regarding burdening instructors with an unmanageable workload. Given the increasing number of students matriculated in online programs (Cavanaugh & Song, 2014), describing online students' preferences for electronic feedback delivered via software applications such as Microsoft Word may help instructors serve students' learning needs more effectively (Nicole & Macfarlane-Dick, 2006). In Chapter 1, I present the background for the study along with the problem statement, purpose statement, research questions, and hypotheses. I also present the theoretical framework, nature of the study, definitions, assumptions, delimitations, limitations, and significance.

Background

Numerous studies have addressed postsecondary students' perceptions and preferences regarding instructor feedback. Several researchers who explored

postsecondary students' perceptions of instructor feedback identified preferred qualities such as clear, detailed comments (Can, 2009; Duncan, 2007; Ferguson, 2011; Glover & Brown, 2006; Mulliner & Tucker, 2015; Rae & Cochrane, 2008; Zacharias, 2007), suggestive rather than directive comments (Can, 2009; Mulliner & Tucker, 2015; Rae & Cochrane, 2008; Treglia, 2008), electronic feedback (Can, 2009; Rae & Cochrane, 2008), prompt feedback (Mulliner & Tucker, 2015; Poulos & Mahony, 2008), and a balance between positive and negative comments (Can, 2009; Duncan, 2007; Ferguson, 2011; Smith, 2008; Treglia, 2008; Weaver, 2006). Researchers also found that active students were more inclined to study and apply instructor feedback than passive students (Duncan, 2007; Rae & Cochrane, 2008; Wingate, 2010; Zacharias, 2007). Studies have indicated that students prefer feedback that aligns with assignment criteria (Ferguson, 2011; Weaver, 2006; Wolsey, 2008) and enhances their performance on upcoming assignments (Ferguson, 2011; Orsmond & Merry, 2011; Poulos & Mahony, 2008; Rae & Cochrane, 2008, Weaver, 2006). Studies done with English as a foreign language (EFL) students indicated that students' preferences appeared to be associated with their literacy levels (Boram, 2009; Tabatabaei & Ahranjani, 2012).

Researchers discovered that the utility of instructor feedback from the student's perspective sometimes depends on the instructor's perceived credibility (Carless, 2006; Poulos & Mahony, 2008; Zacharias, 2007). Researchers who compared students' perceptions of written, audio, and video feedback found that students preferred written feedback for microlevel issues and audio feedback for macrolevel issues (Cavanaugh & Song, 2014; Ice et al., 2010; Silva, 2012). Several researchers argued that a multimodal

approach combining written, audio, or video feedback may be the ideal way to accommodate students' preferences (Crews & Wilkinson, 2010; Ice et al., 2010; Nordrum, Evans, & Gustafsson, 2013; Tuzi, 2004).

Other researchers investigated the impact of formative feedback on student learning (Duncan, 2007; Mirzaee & Hasrati, 2014; Nordrum et al., 2013; Panadero & Jonsson, 2013; Vardi, 2012; Wingate, 2010). Some studies indicated that students valued instructor feedback (Md Nordin, Halib, Ghazali, & Mohd Ali, 2010; Vardi, 2013; Weaver, 2006) while other studies showed they did not (Glover & Brown, 2006; Zacharias, 2007). Several researchers discovered misalignment between students' and instructors' perceptions of the utility of feedback (Amrhein & Nassaji, 2010; Carless, 2006; Glover & Brown, 2006; Korte, 2015; Shawish & Al-Raheem, 2015; Zacharias, 2007). These findings suggested that a disconnect between instructor assumptions and student preferences may undermine the learning process. Several researchers encouraged instructors to enhance their awareness of their students' preferences to promote learning more effectively (Ali, 2011; McVey, 2008; Rae & Cochrane, 2008; Schulz, 2001; Tabatabaei & Ahranjani, 2012; Weaver, 2006).

Most of the studies done on postsecondary students' feedback preferences addressed students attending brick-and-mortar institutions. Few studies addressed online students' preferences (Cavanaugh & Song, 2014; Gallien & Oomen-Early, 2008; McVey, 2008; Wolsey, 2008). In addition, none of these studies targeted a large sample of participants to yield generalizable results. Budge (2011) and Ferguson (2011) noted that online students' preferences had not been adequately explored and that studies should be

done to fill this gap so instructors can accommodate online students' learning needs more effectively.

Problem Statement

Several researchers have noted that student preferences and instructor assumptions regarding feedback are sometimes misaligned, which may impede learning (Amrhein & Nassaji, 2010; Carless, 2006; Glover & Brown, 2006; Korte, 2015; Shawish & Al-Raheem, 2015; Zacharias, 2007). Researchers have not conducted a large-sample study exploring online students' preferences for electronic feedback delivered via software applications such as Microsoft Word. Ice et al. (2010) argued that students are the best judges of the utility of instructor feedback, and therefore students' preferences should be understood to accommodate their learning needs more effectively. Ice et al. also argued that students' "self-report is clearly a valid, if not the most valid, measure of the efficacy of feedback modalities" (p. 121). Crews and Wilkinson (2010) asserted that detailed, meaningful instructor feedback adds value to the learning process and that instructors working in an online environment should consider how their feedback can enhance their students' writing skills. Wolsey (2008) and Nordrum et al. (2013) agreed that instructor feedback plays an important role in the formative learning process that occurs within individual writing projects and also in the development of skills that students will employ in future assignments. A study describing online students' preferences for electronic feedback may help instructors use students' preferred pathways and may thereby increase the likelihood of students reading and applying the feedback when preparing upcoming assignments.

Purpose of the Study

The purpose of this study was to describe undergraduate- and graduate-level online students' preferences for instructor feedback delivered electronically via software applications such as Microsoft Word. The purpose also included describing reasons why students prefer certain types of feedback more than others. An additional purpose was to test for variation among online students' preferences based on age, grade level, online experience, and English-language status. However, due to the lower than expected sample size and the disproportionate representation of graduate students, native English speakers, and experienced online learners in the self-selected participant sample, this third purpose could not be satisfied. A sequential explanatory mixed-methods design was used to generate quantitative and qualitative data (Creswell, 2009) that were analyzed using descriptive frequencies and theme identification to describe postsecondary online students' preferences for electronic feedback.

Research Questions

This study was done to answer the following two research questions:

1. What types of electronic feedback in word-processing software do postsecondary online students prefer?
2. What reasons do postsecondary online students give for preferring certain types of electronic feedback but not others?

I answered Research Question 1 using descriptive frequencies from participant responses to closed survey questions and themes from participant responses to open-ended survey

questions and interview questions. I answered Research Question 2 using themes from participant responses to open-ended survey questions and interview questions.

Theoretical Framework

Vygotsky's (1978) social-constructivist theory provided a suitable framework for this study. According to Vygotsky, learning creates the zone of proximal development (ZPD) and "sets in motion a variety of developmental processes that would be impossible apart from learning" (p. 90). Vygotsky argued that learning promotes internal developmental processes that occur only when the student is collaborating with individuals in his or her environment. Instructor feedback was situated as a scaffolding tool used to move students through their ZPD as emerging academic writers (Benko, 2012; McCarthy, 2015). In this study, I applied social-constructivist principles by encouraging recognition of the significance of students' preferences in the instructor-student relationship (Benko, 2012) and by exhorting instructors to engage with students in the recursive writing process by embracing their preferences as essential to their writing skill development (Budge, 2011; Ferguson, 2011).

Stine (2010) recommended Vygotsky's social-constructivist theory as an appropriate framework for promoting writing development at the postsecondary level. Stine observed that students in first-year courses sometimes require higher levels of scaffolding to address competency gaps in critical reading, writing, and time management. Stine supported hybrid courses as the preferred method for promoting students' movement through their ZPD because the face-to-face environment allows for more efficient, synchronous instructor-student interaction while the online setting

facilitates writing development as the required means of communication. Citing Wolsey's (2008) research, Stine noted the importance of online instructors accommodating their students' preferences for electronic feedback. Stine's acknowledgement supported Benko's (2012) application of social-constructivist theory, which encouraged instructors to customize their feedback based on their students' preferences. In Chapter 2, I present a more detailed explanation of how Vygotsky's social-constructivist theory has been applied in recent empirical studies addressing students' preferences for instructor feedback and the impact of feedback on student learning.

Alternative Conceptual Models

I considered a conceptual framework combining elements from product, process, and postprocess theories of writing instruction. Product theory would have contributed an emphasis on error correction and proper usage in academic writing (Young, 2009); however, product theory privileges the instructor and ignores students' personal circumstances, including preferences for certain types of feedback and the desire to write multiple drafts to develop their writing skills. Process theory compensates for this weakness in product theory by emphasizing the constructivist relationship between instructor and students. Process theorists assert that writing is a recursive rather than linear process (Hairston, 1982; Murray, 2009; Winter & Winter, 1995) and that feedback is essential for skill development. Postprocess theorists critique the assumptions of process theory by calling attention to the persistent instructor hegemony in the composition classroom (Atkinson, 2009; Yood, 2005) and admonishing instructors not to make assumptions about students' preferences for writing feedback (Heard, 2008). As I

considered contributions from product, process, and postprocess theories, I struggled to develop a coherent conceptual framework that aligned theoretical elements with a mixed-methods approach. Process and postprocess theories aligned with my research questions and proposed methods, but product theory did not.

Another conceptual framework I considered was used by Wolsey (2008) in a study on graduate students' preferences for electronic feedback. Wolsey used the critical action research model to frame his study; however, Wolsey did not provide a full explanation regarding why this model was appropriate. Davis (2013) asserted that critical action research combines the action research approach with critical theory to expose the researcher's hegemony in the researcher-participant relationship. According to Davis, the critical action research model empowers participants to take a more assertive role in answering the research questions posed in the study. In this model, participants become collaborators rather than subjects in the research process. The critical action research model was attractive because I also sought to empower students to become co-researchers by contributing detailed quantitative and qualitative data in surveys and interviews. I envisioned the interview process would provide an empowering platform for students not only to communicate their preferences but also to explain them based on previous experiences as writers and students. However, the critical action research model lacked the emphasis on learning provided by social-constructivist theory. Moreover, critical action research did not appear to align with the quantitative data I intended to collect, which would focus exclusively on electronic feedback.

Nature of the Study

I chose a sequential explanatory mixed-methods design by employing a survey questionnaire containing closed and open-ended questions, followed by interviews with participants to probe their preferences more deeply (Patton, 2002). Survey questions were adapted from those used by Budge (2011) and Wolsey (2008), and permission was obtained prior to the study (Appendix C; Appendix D). Closed questions were designed using multiple choice or Likert-scale responses. Open-ended survey questions allowed participants to communicate their preferences in their own words, which affirmed the collaborative learning process promoted by social-constructivist theory (Benko, 2012). I collected additional qualitative data from interviews with volunteer participants. Several researchers who investigated student perceptions of instructor feedback used a mixed-methods approach combining survey questionnaires and interviews (Can, 2009; Carless, 2006; Hounsell, McCune, Hounsell, & Litjens, 2008; Weaver, 2006; Wingate, 2010; Zacharias, 2007). This approach enabled triangulation of closed, open, and oral responses from participants. According to Patton (2002), the use of interviews permits deeper probing of participants' perceptions.

I collected survey data from 93 undergraduate and graduate students attending a large private online university in the Midwestern United States. I also collected interview data from four participants who had completed the survey. I used descriptive frequencies when analyzing quantitative survey data. I analyzed qualitative survey data and interview data for themes and compared these with results from quantitative questions. When I found consistencies or discrepancies between quantitative and qualitative findings, social-

constructivist theory provided a suitable lens for evaluating these similarities or differences. A social-constructivist theoretical framework supporting a sequential explanatory mixed-methods design provided an effective platform for describing postsecondary online students' preferences for instructor feedback.

Definitions

Electronic feedback: Edits, comments, and questions delivered from instructors to students via word-processing software applications such as Microsoft Word. Electronic feedback is typically presented via Microsoft Word or portable document format (PDF) attachments delivered in grade books contained in online learning systems (OLS) such as Blackboard and eCollege. Electronic feedback can also be delivered via e-mail or in OLS discussion boards or document sharing areas (Budge, 2011).

Feedback: Poulos and Mahony (2008) used social-constructivist terms to define feedback as information intended to distinguish between students' actual and desired performance, a definition that I applied in this study. Shawish and Al-Raheem (2015) used similar constructivist terms when defining feedback as information that helps students close the performance gap "between intent and effect" (p. 60). According to Sadler (as cited in Walker, 2008), instructor information should be considered feedback only if students can use it to alter their performance gap. However, I did not apply Sadler's qualification in this study.

Perceptions: Students' observations regarding instructor feedback, which may or may not reflect their preferences.

Preferences: Students' desires for specific qualities in instructor feedback, such as directive, suggestive, prompt, and detailed.

Written feedback: Handwritten feedback as opposed to text-based feedback delivered electronically via software applications such as Microsoft Word.

Assumptions

The primary assumptions in this study were that postsecondary online students had developed an awareness of their preferences for instructor feedback delivered electronically and were willing to report those preferences honestly and accurately. To mitigate the potentially limiting effects of this assumption, I included a glossary at the beginning of the survey (Appendix A), which defined key terms associated with electronic feedback delivered via software applications such as Microsoft Word. I assumed participants would review the glossary to ensure they understood the terminology used in the survey questions.

Scope and Delimitations

I limited my focus to postsecondary online students' preferences, which may prevent generalization to the broader community of postsecondary students not matriculated in online or hybrid programs. I also focused on postsecondary students and did not consider the preferences of elementary or secondary learners. The convenience sample of online students from one university may limit generalization to students from other postsecondary institutions. I also focused primary attention on students' preferences for text-based feedback delivered electronically via software applications and did not

explicitly investigate preferences for other types of feedback including audio, video, and face to face. In addition, I focused on instructor feedback rather than peer feedback.

Limitations

This study was limited by participants' self-selection. Carless (2006) noted that students with high achievement motivation were generally more receptive to instructor feedback, while students with low achievement motivation were more susceptible to feelings of discouragement and were therefore more likely to disregard instructor feedback. Wingate (2010) observed that students with low self-efficacy were less likely to value instructor feedback. Based on these findings, I acknowledged that postsecondary students with greater self-efficacy as academic writers may have been more likely to participate in a study investigating their preferences for instructor feedback because they valued it more than students with low self-efficacy. As a result, findings may have reflected the preferences of students with high achievement motivation who were more likely to report their preferences for instructor feedback than students with low achievement motivation (Weaver, 2006).

I attempted to mitigate the impact of this presumed limitation by sampling a large number of online students and by using inclusive measures when soliciting student participation. I also included a survey question addressing participants' willingness to read instructor feedback (Appendix A). This question was intended to confirm or disconfirm the presumed sampling limitation. If most participants reported that they had read instructor feedback regularly, my study's findings would be limited as described

above. However, if a modest percentage of students reported that they had not read instructor feedback regularly, this limitation would be partially mitigated.

An additional limitation was the inability to answer a proposed third research question by testing for variation among online students' preferences based on the demographic variables of age, grade level, online experience, and English-language status. Due to the lower than expected sample size and the disproportionate representation of graduate students, native English speakers, and experienced online learners in the self-selected participant sample, this additional purpose could not be satisfied.

Other limitations included participants' understanding of the survey questions and their willingness to provide honest, accurate responses. When soliciting participants' informed consent, I included language that requested their accurate and honest responses to survey and interview questions. I asked colleagues who had experience with writing instruction as well as my committee members to review my survey and interview questions to ensure the language would be easily understood by participants. In addition, fellow students in an advanced research methods course shared their feedback regarding my instrument after taking the survey, as authorized by a class assignment. These colleagues provided helpful feedback to clarify the survey questions.

Significance of the Study

Findings may be used to improve the feedback process and enhance course designs by incorporating students' feedback preferences. Nordrum et al. (2013) noted that understanding students' preferences would enable course designers to make informed

choices to enhance curriculum design and facilitate student learning more effectively. Tabatabaei and Ahranjani (2012) suggested that findings regarding differences in scaffolding preferences among Iranian monolingual and bilingual EFL students could enhance writing instruction in other postsecondary settings containing a high percentage of EFL students. Because my study site included many EFL students, findings from my study may benefit their writing skill development. Sugita (2006) found that Japanese EFL students preferred imperative instructor feedback and demonstrated greater likelihood of producing substantive revisions when receiving this type of feedback compared with statements or questions. Sugita's findings indicate that accommodating students' preferences may increase the likelihood of improving their performance outcomes. Shawish and Al-Raheem (2015), who researched Palestinian students' perceptions of instructor feedback practices, agreed that instructor feedback is one of the most influential techniques to promote student achievement.

Findings may also inspire instructors to consider students' preferences when providing feedback on writing assignments. Amrhein and Nassaji (2010) asserted that the effectiveness of written corrective feedback (WCF) depends in part on students' attitudes toward the type of feedback given. Amrhein and Nassaji also noted that students who do not think a certain type of WCF is needed will be less likely to use it. According to Budge (2011) and Johnson and Cooke (2015), instructor feedback plays an important role in student learning, and most students apply feedback to enhance their performance on future assignments. According to Fleming (as cited in Carless, 2006), "marking student scripts is one of the significant quality events in the lives of students and academics" (p.

220). Korte (2015) also noted that feedback constitutes a significant portion of an instructor's workload. With an improved understanding of postsecondary online students' preferences for electronic feedback, instructors may accommodate those preferences and thereby increase the likelihood of enhancing their students' writing skills, which may positively impact students' ability to achieve their academic and professional goals.

Summary

There is a gap in understanding postsecondary online students' preferences for feedback delivered electronically via software applications such as Microsoft Word. Many researchers noted the importance of understanding students' preferences to promote learning (Carless, 2006; Duncan, 2007; Ferguson, 2011; McVey, 2008; Md Nordin et al., 2010; Rae & Cochrane, 2008). Other researchers called attention to the unique needs of online students given the limitations of the asynchronous learning environment (Budge, 2011; Ferguson, 2011; Wolsey, 2008). Therefore, online students' preferences for instructor feedback delivered electronically should be explored to provide instructors with valuable information to accommodate their students' learning needs. Identifying online students' preferences for electronic feedback may help instructors deliver feedback in students' preferred forms and thereby increase the likelihood of the feedback being studied and applied (Crews & Wilkinson, 2012). In Chapter 2, I examine relevant studies in detail and situate my study in a comprehensive review of the literature.

Chapter 2: Literature Review

The emergence of online education has promoted an increased use of electronic feedback in responding to students' writing assignments (Wolsey, 2008). Researchers have investigated students' preferences for feedback in various forms such as handwritten, direct versus indirect, coded versus uncoded, audio recorded, and video recorded (Aliakbari & Toni, 2009; Bilbro et al., 2013; Crews & Wilkinson, 2010; Ice et al., 2010; Md Nordin et al., 2010). However, researchers have not conducted a large-sample study of postsecondary online students' preferences for electronic feedback. The purpose of this study was to describe undergraduate- and graduate-level online students' preferences for instructor feedback delivered electronically using software applications such as Microsoft Word. I also wanted to describe the reasons students give for preferring certain types of feedback more than others. In the following literature review, I present the theoretical framework for my study and describe how this framework has been applied in similar studies. I then examine studies that addressed students' perceptions of written, audio, and video feedback. I also examine studies that involved a comparison of student and instructor perspectives and addressed the impact of instructor feedback on student learning.

Literature Search Strategy

I conducted literature searches using the following databases in the Walden University Library: Academic Search Complete, Business Source Complete, CINAHL Plus with Full Text, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Cochrane Methodology Register, Communication & Mass Media

Complete, Computers & Applied Sciences Complete, Database of Abstracts of Reviews of Effects, eBook Collection (EBSCOhost), Education Research Complete, ERIC, Funk & Wagnalls New World Encyclopedia, GreenFILE, Health and Psychosocial Instruments, Health Technology Assessments, Hospitality & Tourism Complete, LGBT Life with Full Text, Library Information Science & Technology Abstracts, MAS Ultra School Edition, MEDLINE with Full Text, Military and Government Collection, NHS Economic Evaluation Database, Political Science Complete, Primary Search, PsycARTICLES, PsycBOOKS, PsycCRITIQUES, PsycEXTRA, PsycINFO, Regional Business News, Research Starters Education, SocINDEX with Full Text, Teacher Reference Center, PsycTESTS, International Security & Counter Terrorism Reference Center, and Mental Measurements Yearbook with Tests in Print. I used the following key words when searching the databases: *writing feedback preference*, *student feedback preference*, *effective feedback writing*, *writing feedback technique*, *composition theory writing*, and *grammar instruction postsecondary*. When searching the academic databases, I limited results to full-text peer-reviewed articles published since 2005. I also searched ProQuest Dissertations and Theses Global using the following key words: *writing feedback preference* and *student feedback preference*. I limited my search to dissertations and master's theses published since 2005. In addition, I used the Google Scholar search engine to identify articles that may not have been available in the databases. I used the same key words (*writing feedback preference*, *student feedback preference*) and read abstracts from the first 200 articles listed for each key word combination. Finally, I examined reference lists from published articles and dissertations

chosen for my literature review and, using Google Scholar, located each prospective article, read the abstract, and chose to read the full article or not based on the delimitations of my study.

Theoretical Foundation

Vygotsky's social-constructivist theory provided a suitable framework for studies addressing student preferences for instructor feedback and the impact of feedback on student learning. According to Vygotsky (1978), the zone of proximal development "is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). In social-constructivist terms, feedback is a scaffolding tool used to move students through their zones of proximal development from other regulation to self-regulation (Benko, 2012; McCarthy, 2015). Yoshida (2010) used Vygotsky's social-constructivist theory as a framework for a qualitative study examining students' and instructors' perceptions of corrective feedback in a second-year Japanese language course at the University of New South Wales in Australia. Rahimi (2013) employed Vygotsky's social-constructivist theory to frame a study investigating the influence of peer-reviewer training on the scaffolding that occurs in peer-feedback exercises. Mirzaee and Hasrati (2014) used Vygotsky's social-constructivist theory when framing their qualitative study exploring the influence of formative written feedback on nonformal learning.

Formative Application

Mirzaee and Hasrati (2014) argued that both instructor feedback and peer feedback can facilitate movement from actual development to potential development by functioning as a scaffolding tool. McCarthy (2015) also described feedback as an essential scaffolding tool to promote student learning. Orsmond and Merry (2011) cited Vygotsky's theory of instruction and development, noting that the former precipitates the latter and inspires a chain reaction of events that propels the student through his or her zone of proximal development. According to Sadler (as cited in Orsmond & Merry, 2011), formative feedback facilitates students' self-engagement and promotes greater self-reliance. Nordrum et al. (2013) asserted that students' preferences for in-text comments and rubric feedback confirmed the efficacy of formative assessment in promoting self-regulation in students' writing. Wingate (2010) noted that formative assessment can enhance self-regulation by helping students bridge the gap between current and desired performance.

Self-Regulation

Treglia (2008) asserted that the consensus among postsecondary educators is to promote students' ability to evaluate their own work. Using social-constructivist terms, Treglia argued that instructors should try to increase students' self-regulation as writers and thinkers. Walker (2009) employed social-constructivist principles by defining *useable feedback* as that which enables students to alter their gap in learning. McVey (2008) noted that instructor feedback promotes learning by enhancing students' self-regulation, improving their motivation, and reducing their anxiety. Sommers (as cited in

Bilbro et al., 2013) argued that instructor feedback plays a prominent role in promoting students' writing development only when instructors and students develop a partnership in which students are treated as apprentice writers who receive honest, constructive feedback. Szymanski (2014) also supported the use of professional-genre assignments that situate undergraduate students as apprentice writers and encourage their self-regulation as emerging scholars.

Scaffolding Preferences

Ice et al. (2010) rejected the narrow interpretation of Vygotsky's social-constructivist theory, which asserted that learners cannot value an instructor's presence without physical proximity. Instead, Ice et al. argued that the asynchronous online environment can promote social presence and interpersonal communication required for constructivist learning. Ice et al. found that audio feedback might be more effective in stimulating higher-order thinking while text-based feedback might be preferable for mechanical issues such as sentence structure and APA formatting.

Tabatabaei and Ahranjani (2012) found that monolingual EFL Iranian students preferred higher levels of scaffolding (e.g., both corrections and comments with all errors marked) while bilingual students preferred lower levels of scaffolding (error identification with few errors marked). Tabatabaei and Ahranjani argued that bilingual students' preference for feedback promoting self-regulation seemed consistent with their enhanced confidence resulting from greater English-language proficiency. Stine (2010) observed that first-year students may require higher levels of scaffolding to address gaps in reading, writing, and time-management skills. Wolsey (2008) asserted that highly

specific feedback may be more beneficial to students with significant learning obstacles than to students with more developed writing skills. Wolsey's observation was consistent with Tabatabaei and Ahranjani's (2012) and Stine's (2010) findings that students' scaffolding preferences appeared to be associated with their English literacy levels. Although other researchers exploring students' preferences for instructor feedback did not cite Vygotsky's social-constructivist theory explicitly, this framework remains a useful tool for analyzing studies on the topic.

Overview of Findings From Empirical Studies

Many studies addressed student perceptions of desirable qualities of instructor feedback. Several researchers found that students preferred clear, detailed feedback (Can, 2009; Duncan, 2007; Ferguson, 2011; Glover & Brown, 2006; Rae & Cochrane, 2008; Zacharias, 2007) and often preferred suggestive rather than directive feedback (Can, 2009; Rae & Cochrane, 2008; Treglia, 2008). However, Sugita (2006) discovered that Japanese EFL students preferred imperative comments rather than statements or questions. Sugita suggested that cultural factors may have influenced students' preferences. Some researchers reported that postsecondary students preferred electronic feedback (Can, 2009; Rae & Cochrane, 2008). On the other hand, Budge (2011) found that brick-and-mortar millennial students did not prefer electronic feedback. However, Budge's sample was limited by a large percentage of participants matriculated in vocational programs who favored face-to-face feedback. Some researchers reported students' concerns about the legibility of handwritten feedback (Ferguson, 2011; McVey, 2008). In addition, researchers reported students' preferences for prompt feedback

(Poulos & Mahony, 2008) and for a balance between positive and negative comments (Can, 2009; Duncan, 2007; Ferguson, 2011; Smith, 2008; Treglia, 2008; Weaver, 2006).

Applicability of Instructor Feedback

Some researchers found that application of feedback was more noticeable in active versus passive students (Duncan, 2007; Rae & Cochrane, 2008; Zacharias, 2007). Students also reported a desire for early training in understanding instructor feedback (Poulos & Mahony, 2008) and for feedback that improves performance on future academic assignments and professional work (Ferguson, 2011; Orsmond & Merry, 2011; Poulos & Mahony, 2008; Rae & Cochrane, 2008, Weaver, 2006). Some students indicated a preference for iterative, holistic feedback that connects course work and exams (Hounsell et al., 2008) while other students valued feedback because teachers control grades (Zacharias, 2007). Several researchers found that students prefer feedback that aligns with assignment criteria (Ferguson, 2011; Weaver, 2006; Wolsey, 2008). Researchers also discovered that the usefulness of instructor feedback depends on the perceived credibility of the instructor (Carless, 2006; Poulos & Mahony, 2008; Zacharias, 2007).

Some studies indicated that students were more interested in global than local feedback (Bilbro et al., 2013; Ferguson, 2011; Smith, 2008). However, other studies showed that students preferred written feedback for local issues and audio feedback for global issues (Cavanaugh & Song, 2014; Ice et al., 2010; Silva, 2012). Bilbro et al. (2013) found that students who were invested in their academic development preferred audio feedback more than students who were not. Several researchers concluded that a

multimodal approach combining different types of feedback seems to be ideal (Crews & Wilkinson, 2010; Ice et al., 2010; Nordrum et al., 2013; Tuzi, 2004).

Studies done with EFL students indicated that their preferences for scaffolding interventions may be associated with their literacy levels (Tabatabaei & Ahranjani, 2012). EFL students with lower levels of English proficiency appeared to benefit from more intrusive scaffolding while students with higher proficiency levels seemed to require less intrusive scaffolding (Boram, 2009; Tabatabaei & Ahranjani, 2012). Students reported a clear preference for personalized feedback (Rae & Cochrane, 2008), which appeared to promote learning more effectively than collective feedback (Gallien & Oomen-Early, 2008). Some researchers noted that personalized feedback on related assignments can be especially helpful (Vardi, 2012, 2013).

Several studies addressed the instructional efficacy of providing feedback in students' preferred forms such as handwritten, direct versus indirect, coded versus uncoded, audio recorded, and video recorded (Aliakbari & Toni, 2009; Bilbro et al., 2013; Crews & Wilkinson, 2010; Ice et al., 2010; Md Nordin et al., 2010). According to Gibbs, Simpson, and Macdonald (as cited in Carless, 2006), instructors may view oral comments as a valid form of feedback, but students may not value this type of feedback as much as written comments. Gallien and Oomen-Early (2008) acknowledged the importance of instructors embracing the increased demands of written communication in the online environment. According to Picciano (as cited in Gallien & Oomen-Early, 2008), online instruction requires increased reliance on written versus oral

communication. Palloff and Pratt (as cited in Gallien & Oomen-Early, 2008) observed that feedback is provided primarily in written form in the online environment.

Bilbro et al. (2013) acknowledged that composition instructors must "balance their desire to provide personalized, meaningful feedback with the limited time they can allot to each paper" (p. 47). Lunt and Curran (2010) noted the significant pressure on instructors to provide prompt, detailed feedback to high volumes of students in postsecondary courses. Riddell (2015) noted that increasing the number of feedback loops involving drafts, feedback, and revisions can enhance students' metacognitive awareness and promote development of academic writing skills; however, Riddell also expressed concern about burdening instructors with an unmanageable workload. Silva (2012) observed that instructors' motivation to experiment with different feedback methods often depends on the time required to provide the feedback. Silva asserted that "electronic feedback via Microsoft Word comments…affords the reader nearly an infinite amount of space to provide commentary" (p. 3). Silva conceded that video technology provides similar advantages, but she expressed concern about instructors' willingness to spend extra time on video feedback and also cautioned that the size of video files may limit delivery options. Silva acknowledged that audio comments can personalize the feedback process; however, Silva also noted that technology issues may impede students' reception of audio feedback. In addition, the lack of proximity of audio comments to essay text may reduce the impact of audio feedback on student revisions and learning. Finally, Silva noted that online students in a distance learning environment may have a

difficult time scheduling synchronous student-teacher conferences while managing their personal and professional responsibilities.

Impact of Feedback on Learning

McVey (2008) argued that instructor feedback has been well established as an important factor in student learning. McVey also observed that effective feedback encourages students to take an active role in their learning. McVey asserted that online instructors should engage students in the learning process by understanding their feedback preferences to improve their writing performance. McVey also argued that feedback is the primary means by which online instructors enhance students' feelings of connectedness and engagement. Mirzaee and Hasrati (2014) agreed with Hyland (as cited in Mirzaee & Hasrati, 2014) that students must reflect, respond, and act upon instructor feedback for learning to occur. Mirzaee and Hasrati found that instructor written feedback promoted spontaneous and deliberative nonformal learning that enabled students to comprehend, internalize, and apply the feedback to future writing assignments. Agreeing with McVey (2008), Ferguson (2011) recognized the emerging body of research confirming the importance of instructor feedback to student learning in postsecondary education. According to Case (as cited in Ferguson, 2011), assessment feedback is necessary to promote learning and to motivate students to reflect on and improve their writing skills.

Md Nordin et al. (2010) agreed that instructor feedback enhances writing skill development. Carless (2006) also asserted that "feedback is central to the development of effective learning" (p. 219). Carless discovered that students were enthusiastic

participants in the study because they had never been asked about their feedback preferences and were excited to be included in the assessment process. Carless's findings affirmed the social-constructivist principles used to frame my study, which asserted that students' preferences should be acknowledged as essential to the learning process. According to Hounsell (as cited in Carless, 2006), students learn more quickly and more effectively when they have a clear idea of how they are doing and how they can improve their performance.

Duncan (2007) agreed that feedback is essential to student learning and that successful students make productive use of feedback to enhance their writing skills. Budge and Gopal (as cited in Budge, 2011) found that 95% of participants reported that they used feedback to improve their performance on future writing assignments. Hounsell et al. (2008) observed that instructor feedback has long been considered an essential element of learning in higher education. Poulos and Mahony (2008) noted that effective feedback is a well-established instructional strategy to promote student learning. Poulos and Mahony also observed that *effective* means appropriate, timely, and specific to the student's individual needs. Poulos and Mahony argued that "student expectations are congruent with good learning practices" (p. 153).

Szymanski (2014) asserted that feedback is the most personal, specific, and direct way in which students are given writing instruction. Weaver (2006) agreed that feedback stimulates student reflection and development and is an essential part of the learning process. Weaver also noted that identifying students' strengths and weaknesses can facilitate self-assessment and application of feedback to future writing assignments.

According to Maclellan (as cited in Weaver, 2006), students improve their writing skills when they perceive feedback as helpful to learning and not simply as evaluation of performance. Wingate (2010) found that students with high achievement motivation value formative feedback. Duncan (2007) reported that formative feedback may help students develop their revision skills. Vardi (2012) also observed that formative feedback may have a larger impact on macrolevel issues than microlevel issues. Formative application of rubrics also appears to enhance students' writing development (Nordrum et al., 2013; Panadero & Jonsson, 2013).

Rae and Cochrane (2008) argued that feedback is a crucial element of the learning cycle. Rae and Cochrane noted that instructors' failure to acknowledge the student's perspective may undermine the learning process. According to Gibb and Simpson (as cited in Rae & Cochrane, 2008), "feedback is one of the most powerful single influences on student growth, development, learning and achievement" (p. 228). Rae and Cochrane warned against instructors privileging their disciplinary perspective regarding the meaning of appropriate feedback at the expense of the student's perspective. Rae and Cochrane also found that students expressed interest in electronic feedback, which was perceived to be more convenient and effective. Rae and Cochrane concluded that "the electronic medium may be the best suited to meet student needs when imparting feedback" (p. 227). Crews and Wilkinson (2010) agreed that technology plays an important role in facilitating students' understanding of instructor edits and comments.

Discrepancies Between Student and Instructor Perspectives

Some researchers found that students considered instructor feedback helpful (Md Nordin et al., 2010; Vardi, 2013; Weaver, 2006) while other researchers found that students did not value instructor feedback (Glover & Brown, 2006; Zacharias, 2007). Walker (2009) reported mixed results regarding students' perceptions of the efficacy of instructor feedback in promoting learning. Researchers who compared student and instructor perspectives often found misalignment regarding the perceived value of feedback (Amrhein & Nassaji, 2010; Carless, 2006; Glover & Brown, 2006; Korte, 2015; Shawish & Al-Raheem, 2015; Zacharias, 2007). Instructors sometimes considered their feedback more helpful than it was (Carless, 2006; Shawish & Al-Raheem, 2015; Zacharias, 2007). Researchers who analyzed instructor feedback found that most instructors addressed lower-level issues rather than content issues and used a directive rather than a suggestive approach (Stern & Solomon, 2007; Szymanski, 2014). These findings suggest a possible broader misalignment between instructor practices and student preferences for collaborative, mitigated feedback (Can, 2009; Rae & Cochrane, 2008; Treglia, 2008). Several researchers argued that instructors should increase their awareness of their students' preferences to enhance the feedback process and promote student learning (Ali, 2011; McVey, 2008; Rae & Cochrane, 2008; Schulz, 2001; Tabatabaei & Ahranjani, 2012; Weaver, 2006).

Perceptions of Instructor Feedback

Several studies have been conducted since 2005 on postsecondary students' perceptions of instructor feedback. Some researchers focused on written feedback in EFL

courses (Md Nordin et al., 2010; Tabatabaei & Ahranjani, 2012) while others addressed written feedback in courses designed for native English speakers (Can, 2009; Rae & Cochrane, 2008; Treglia, 2008). Researchers investigated students' perceptions of written versus audio feedback (Bilbro et al., 2013; Ice et al., 2010) and explored perceptions of written versus video feedback (Crews & Wilkinson, 2010; Silva, 2012). Researchers also compared students' and instructors' perceptions of various types of feedback to identify potential differences (Amrhein & Nassaji, 2010; Orsmond & Merry, 2011). In addition, researchers investigated the perceptions of online students (McVey, 2008; Wolsey, 2008) and explored postsecondary students' preferences for instructor feedback (Ferguson, 2011; Smith, 2008). In the next section of this literature review, I summarize studies that addressed student perceptions of and preferences for written, audio, video, and electronic text-based feedback. I also review studies that addressed student and instructor perceptions of various types of feedback. In addition, I offer analysis comparing the results of these studies.

Student Perceptions of Written Feedback

Rae and Cochrane (2008) conducted a qualitative study exploring students' perceptions of the usefulness of written assessment feedback. Rae and Cochrane collected interview data from two focus groups, each of which included six nontraditional nursing students pursuing the Scottish Credit Qualifications Framework at a university in Scotland. Rae and Cochrane employed member checking and an experienced third-party researcher to review the data and confirm the identification of themes. Rae and Cochrane found that participants took either an active or passive stance on written assessment.

Active students engaged with the feedback to enhance learning. Passive students were more concerned with grades than skill development. Rae and Cochrane also observed that the timing of feedback delivery and its summative rather than formative intent may have influenced students' perceptions of its utility. According to Rae and Cochrane, most students preferred prompt feedback and also reported a preference for electronic feedback. Rae and Cochrane observed considerable variation in preference among the elements of feedback such as marks, rubrics, feedback sheets, and essay copies; however, students often reported a strong preference for personalized feedback. Students also reported a preference for clear, constructive, detailed feedback that was easily understood, and they disliked negative feedback that did not include explanations or examples to facilitate learning. According to Rae and Cochrane, students expressed keen interest in discussing feedback with instructors and peers to enhance performance on future assignments. Rae and Cochrane concluded that instructors should provide consistent, personalized feedback that encourages self-regulation and provides clear guidelines for improvement. Rae and Cochrane argued that feedback should feed forward to upcoming assignments to enhance learning. Rae and Cochrane also argued that productive assessment practices require an institutional commitment to curricular design and faculty training to support such practices.

Treglia (2008) conducted a qualitative study investigating U.S. community college students' affective responses to directive and mitigated feedback and students' preference for one type more than the other. According to Treglia, mitigated feedback included a praising comment or hedge phrase (e.g., perhaps, maybe) followed by a

critical comment. Treglia's case study included 14 L1 (English as first language) and L2 (English as second language) students and two instructors in a first-year composition course. Participant selection was purposive, including students earning a wide range of grades in the courses. When interviewing the two instructors, Treglia determined that both used a combination of mitigated and directive feedback. When interviewing students, Treglia found that nine preferred mitigated feedback, three preferred directive feedback, and two did not have a clear preference. Moreover, none of the students perceived mitigated feedback as contrived or insincere. Treglia noted that students who preferred mitigated feedback were motivated by the positive encouragement and appreciated the politeness and respect conveyed in mitigated comments. These students also felt intellectually engaged and empowered by feedback that conveyed a sense of collaboration rather than direction, which echoed Rae and Cochrane's (2008) findings regarding students' desire to discuss feedback with instructors. According to Treglia, students also reported that mitigation saved face and minimized hurt feelings. Students who preferred directive feedback indicated that writing decisions are either right or wrong. These students did not tolerate ambiguity and did not embrace the intended empowerment of mitigated feedback. Treglia noted that L2 learners seemed to appreciate mitigated comments more than native speakers. These data do not necessarily contradict Sugita's (2006) findings that L2 learners preferred directive feedback because Sugita was comparing preferences for imperative comments versus statements and questions. Sugita did not address the tone used in imperative comments; instead, Sugita reported that students preferred the clarity and instructional precision of imperative feedback. Both

Treglia's and Sugita's studies affirmed the social-constructivist approach that considers how feedback will be received and whether students will value its contribution to skill development.

Can (2009) conducted a sequential mixed-methods dissertation study investigating doctoral students' perceptions of written feedback. Can initially conducted interviews with 15 doctoral students pursuing social science degrees in two Western U.S. universities. After analyzing qualitative data using grounded theory, Can collected quantitative data from 276 students via a survey instrument. Can found that most students (54%) preferred to submit their papers electronically rather in printed form, and also preferred to receive feedback electronically rather than orally, as Rae and Cochrane (2008) had found. According to Can, students reported that they used feedback most often for justifications, additions, deletions, and clarifications. Students also reported a preference for clear, straightforward, detailed feedback that addressed content, organization, and mechanics. This finding was also consistent with Rae and Cochrane's results. According to Can, students also preferred a balance between positive and negative feedback and a suggestive rather than directive tone, which echoed Treglia's (2008) findings. Can also found that doctoral students reported a preference for feeling comfortable when soliciting feedback and preferred to receive feedback from their committee members more than other professors and colleagues. Participants also reported that they valued committee members' writing and thinking skills more than their content expertise in the area studied. In addition, Can found that anticipated opportunities to coauthor academic papers with faculty encouraged students to solicit feedback more

actively. However, students who had concerns about their emotional response to negative feedback tended to solicit feedback less assertively.

Poulos and Mahony (2008) conducted a qualitative study describing students' perceptions of instructor feedback including its effectiveness and impact on learning. Poulos and Mahony used facilitators to conduct interviews with four focus groups containing student volunteers from the Faculty of Health Sciences department at an Australian university. Facilitators used scripted questions to explore students' perceptions of the credibility and impact of instructor feedback. Poulos and Mahony found that students perceived feedback in various ways including types, relevance, individual application, and accessibility of instructors. Poulos and Mahony also found that students preferred prompt feedback and wanted more feedback in the first year to facilitate adjustment to the university. In addition, Poulos and Mahony found that the perceived effectiveness of feedback depended heavily on the perceived effectiveness of the instructor. Feedback from instructors whom students considered biased was generally perceived as less effective. Poulos and Mahony found that students preferred individual feedback rather than comments delivered to a large group. First-year students preferred feedback that helped them adjust to upper-level work, and students in upper-level courses wanted feedback that helped them transition to professional life. According to Poulos and Mahony, students also reported that negative feedback had a demoralizing impact on their motivation and learning. Overall, students preferred consistency and transparency in assessment practices, clear alignment of feedback with assignment criteria, and prompt feedback combining comments and grades. Poulos and Mahony concluded that students'

perceptions of the effectiveness of feedback extend beyond its type and timeliness and include its relevance to upcoming academic and professional challenges.

Weaver (2006) conducted a mixed-methods study investigating students' perceptions of instructor feedback to determine whether it was helpful and student centered. Weaver sampled 44 undergraduates pursuing degrees in business and art/design from a British university. Weaver collected data using a mixed-methods questionnaire containing Likert-scale and open-ended questions. Weaver also conducted group discussions with 22 students to gather additional qualitative data. Weaver found that 96-100% of students claimed they understood comments such as "logical and coherent structure" and "key concepts identified," but more than 40% of students expressed concerns about comments they considered ambiguous, such as "more critical reflection needed" and "superficial analysis" (p. 383). Weaver also found that high percentages of students reported that tutors did not provide enough feedback (96% business, 75% design) and did not include enough positive comments (80% business, 75% design). Despite these concerns, a majority of students (63% business, 70% design) reported that feedback helped them reflect on what they had learned. When analyzing the qualitative data, Weaver found four themes characterizing unhelpful feedback as vague or general, lacking in suggestions for improving future work, negative or preoccupied with weaknesses, and lacking alignment with assessment criteria. Weaver concluded that students appeared to value instructor feedback but expressed concerns about its usefulness. Weaver argued that tutors should become mindful of their response styles and strive to balance positive and critical feedback while ensuring that comments are aligned

with assessment criteria and learning objectives. Weaver's findings also confirmed the social-constructivist framework for my study, which emphasized collaboration between students and instructors in the feedback process.

Hounsell et al. (2008) conducted a mixed-methods study investigating students' perceptions of instructor guidance and feedback provided in course examinations and assignments in first-year and final-year bioscience courses at several British universities. Hounsell et al. sampled 841 undergraduate students from first-year courses and 83 students from final-year courses. Hounsell et al. used the Experiences of Teaching and Learning Questionnaire (ETLQ) to gauge students' perceptions of guidance and feedback. Hounsell et al. found that clarity of expectations was rated the highest preference for guidance among the six course units surveyed. However, Hounsell et al. also found that a significant minority of students reported concerns about clarity of expectations. Interview data indicated that students preferred a more iterative process involving stages and phases that connected course work and exams in a coherent assessment regime. According to Hounsell et al., this preference for a holistic feedback loop was unexpected and unprecedented in the literature. Hounsell et al. concluded that this model of assessment could yield considerable formative benefits as students apply feedback from past assignments to enhance performance on upcoming assignments.

Md Nordin et al. (2010) conducted a quantitative study measuring EFL students' perceptions of the usefulness of instructor feedback on writing assignments. Md Nordin et al. sampled 69 undergraduates in an engineering program at a Malaysian university. Over a 2-month period, students were asked to write two essays: a technical instructions

paper and a technical recommendation report. Students received guidance from instructors, peers, and a sample essay. Peers provided initial feedback on content and form by writing comments in a peer-feedback form. Instructors then addressed form and content in students' essays by providing indirect feedback (highlighting errors but not correcting them). Instructors also included a brief description of the error in a marginal comment but did not use formal grammar codes. In addition, instructors examined the peer-feedback forms for accuracy and relevance. After the treatment phase, students were asked to complete a questionnaire containing eight questions with 6-point Likert-scale responses ranging from strongly disagree to strongly agree. According to Md Nordin et al., students reported that instructor feedback was reliable and helped them become better writers. Students also reported that instructor feedback improved their confidence and deepened their understanding of assignment expectations. Based on students' responses, Md Nordin et al. concluded that their study refuted arguments that grammar correction was not helpful in promoting writing skill development. However, Md Nordin et al. based their conclusion on students' perceptions of improvement rather than objective measures of skill development. In addition, Md Nordin et al. did not include the survey questions in their report, which impeded evaluation of the instrument as a measure of students' perceptions. Moreover, it was not clear whether peer feedback influenced students' perceptions of instructor feedback. In addition, Md Nordin et al. excluded alternative feedback types in their study, so students' perceptions of the usefulness of instructor feedback was limited. In addition, Md Nordin et al. did not describe their role in the study, so it was not clear whether experimenter bias was controlled. Finally, Md Nordin

et al.'s sampling of L2 learners limited generalizability of findings to other learning environments. Despite these limitations, Md Nordin et al.'s findings suggest that students value instructor feedback as a means of developing their writing skills.

Comparing Student and Instructor Perceptions of Written Feedback

Amrhein and Nassaji (2010) conducted a mixed-methods study comparing English as a second language (ESL) students' and instructors' perspectives on different types of written corrective feedback (WCF). Amrhein and Nassaji wanted to determine the types and amounts of WCF that students and teachers thought were most useful and why. Amrhein and Nassaji also wanted to determine the types of errors that students and teachers thought should be corrected and whether their perspectives differed on WCF. Amrhein and Nassaji used a survey questionnaire to gather data from 33 adult students and 31 teachers in upper-intermediate and advanced classes at two private English-language schools in Canada. Amrhein and Nassaji found that most students (94%) and less than half of the teachers (45%) preferred all errors to be marked, as opposed to some or none. In addition, some students (9%) preferred major errors to be marked while teachers preferred to mark errors that disrupted communication (26%); this difference was significant and suggested that teachers but not students discriminate when deciding which errors to mark. Amrhein and Nassaji also found that most students (78%) wanted to see all of their errors marked so they could improve their writing. In addition, the qualitative data indicated that most teachers were sensitive to their students' preferences when providing feedback. Amrhein and Nassaji also found that most students (78%) and teachers (81%) thought that errors should be corrected every time they occurred.

Qualitative data indicated that students preferred to see the patterns of their errors while teachers wanted to be consistent in marking errors. When examining Likert-scale responses to types of feedback, Amrhein and Nassaji found several significant differences between students and teachers. Teachers showed a stronger preference for providing clues to fix errors (e.g., comments with no correction) and adding comments on content. Students, on the other hand, preferred overt correction of errors. Regarding the inclusion of comments with error correction, students most often (44%) preferred this approach because it enhanced learning, while an additional 38% thought the approach improved retention of rules. However, most teachers (33%) thought the approach was too time consuming, and attitudes were mixed on the pedagogical efficacy of comments with corrections, with 27% of teachers supporting it and 20% rejecting it. Regarding types of errors to be corrected, students and teachers supported all types with students showing stronger support for spelling and vocabulary and teachers showing stronger support for organization, content, and punctuation. Qualitative data also showed that most teachers considered students' preferences to be important, as Weaver (2006) had found. Amrhein and Nassaji's findings suggest that students preferred a higher level of scaffolding while teachers preferred lower levels presumably to encourage greater self-regulation in students' writing process. Amrhein and Nassaji encouraged instructors to be mindful of students' preferences to ensure that discrepancies between students' and instructors' expectations do not impede learning. Amrhein and Nassaji explained that instructors may need to shift students' expectations to increase autonomy and promote self-regulation.

Glover and Brown (2006) conducted a mixed-methods study investigating students' and instructors' perceptions of the quantity and quality of written feedback. Glover and Brown interviewed six instructors and 13 students from bioscience and physical science undergraduate programs at two universities in England. Glover and Brown found that instructors thought they were providing high-quality feedback that was not being acted upon by students. According to Glover and Brown, students reported a high level of engagement with feedback but did not apply it because it was not relevant to future assignments. In addition, students also reported that feedback was often neither helpful nor abundant. Glover and Brown tested these perceptions by analyzing several hundred randomly selected assignments including short essays, laboratory reports, and short answers to questions. Glover and Brown coded instructor comments in three categories: problem identified, correct answer provided, and problem explained. Glover and Brown found that more than 50% of the instructor comments addressed omissions in science content. Glover and Brown also discovered that mechanical errors were frequently identified but not as often as content omissions. With content omissions, most comments did not include corrections or explanations. With mechanical errors, comments often included corrections but not explanations. Glover and Brown also observed considerable inconsistency in the feedback provided. Glover and Brown found insignificant differences in the volume of comments given to low-scoring and high-scoring assignments. Glover and Brown also observed that instructor feedback was primarily summative rather than formative, which may partially explain students' unwillingness to apply it to future assignments. In addition, Glover and Brown

discovered that students often did not understand the academic discourse used in feedback, which limited its applicability. Glover and Brown concluded that instructors should spend more time providing formative feedback that aligns assessment with learning outcomes.

Carless (2006) conducted a mixed-methods study exploring students' and instructors' perceptions of the feedback process with an eye toward identifying differences that may undermine student learning. More specifically, Carless wanted to explore how language, power, and emotion influenced students' perceptions of instructor feedback. Carless sampled 460 instructors and 1740 students from eight public universities in Hong Kong. Initially Carless collected quantitative data using a survey questionnaire containing mostly Likert-scale questions and one open-ended question. In addition, Carless collected qualitative survey data from 52 students in a teacher education program and interviewed 15 students in the same program. Carless also asked a research assistant to conduct six additional interviews with students. After analyzing data and identifying themes, Carless invited five colleagues to evaluate his assessment of the data. Carless found that instructors considered their feedback to be more detailed and useful than students did. Carless noted that in follow-up interviews instructors suggested that students' perceptions may be more accurate given the high volume of students and assignments to be graded. Carless found that most students valued formative feedback and general comments that fed forward to final drafts and upcoming assignments. Carless also discovered a slight disconnect between instructors' perceptions (that students are only worried about grades) and students' perceptions (that they actually care about

feedback to enhance their writing skills). In addition, Carless found that some students reported an inability to understand instructors' comments, as Glover and Brown (2006) had found, or were unable to read the handwriting. Carless also found that instructors perceived their grading practices to be fair while students had mixed feelings about instructor bias. Carless concluded that student-instructor dialogue about the assessment process can help dispel misconceptions that undermine learning. More specifically, Carless encouraged instructors to explain assessment criteria and affirm that assignment grading is independent of other performance in the course.

Orsmond and Merry (2011) conducted a mixed-methods study comparing students' and instructors' perceptions of feedback on writing assignments. Orsmond and Merry sought to describe instructors' intentions and the ways in which students perceived and acted on those intentions. Orsmond and Merry sampled six instructors and 19 undergraduate students studying biological sciences at a British university. Orsmond and Merry initially analyzed and classified the feedback given to students. Feedback categories included error identification, praise, correction, explanation, suggestion, and demonstration of correct practice. Assignments included essays, short answers, project plans, and portfolios. Orsmond and Merry then conducted interviews with instructors to identify the factors influencing their feedback and their intentions when providing it. Orsmond and Merry also interviewed students to identify their perception of feedback and how it influenced their learning. Orsmond and Merry found that instructors provided roughly the same volume of feedback, and praise was the highest category among 14 of 16 instructors. However, Orsmond and Merry observed considerable differences in the

volume of other categories. When analyzing interview data, Orsmond and Merry found that instructors perceived feedback as clarifying misunderstandings, identifying and correcting errors, encouraging justification of responses, and praising performance. Orsmond and Merry noted that these perceptions were confirmed in the feedback given to students. Orsmond and Merry also discovered that instructors perceived their feedback as promoting application in future assignments; however, analysis of feedback given did not support this perception. Most students (95%) reported that feedback enhanced their learning through error correction, clarification of instructor expectations, and promotion of intellectual debate. In addition, 58% of students reported that they would apply the feedback to similar assignments. This finding matched instructors' assumptions about the influence of feedback on learning despite Orsmond and Merry's contention that instructor comments did not explicitly encourage future application. Orsmond and Merry concluded that students should consider the learning process in a broader context of professional development and that instructors should provide more feedback to raise students' awareness of this level of learning. Orsmond and Merry also recommended more dialogue between instructors and students to encourage students' self-assessment practices and to promote deeper learning for professional development. Students in Rae and Cochrane's (2008) study also expressed a keen interest in student-instructor dialogue about feedback.

Shawish and Al-Raheem (2015) conducted a quantitative study investigating instructors' perceptions of their feedback practices and their awareness of the effectiveness of their practices. Shawish and Al-Raheem also explored students'

perceptions of instructor feedback and investigated possible differences based on gender. The sample included 26 writing instructors and 310 undergraduate students majoring in English at several universities in Palestine. Shawish and Al-Raheem found that instructors and students disagreed on 14 questions addressing type and quality of feedback provided, including the use of sarcasm, red ink, and mitigated comments as well as the time spent providing feedback. In addition, 84% of instructors reported that their feedback improved their students' writing skills, while only 69% of students agreed. Shawish and Al-Raheem also found that instructors reported that they were aware of and followed the seven principles of best practices outlined by Nicole and Macfarlane-Dick (2006). Regarding gender differences among students, Shawish and Al-Raheem found that responses were mostly consistent. However, Shawish and Al-Raheem noted that males showed a stronger preference for practices deemed unsound by Nicole and Macfarlane-Dick, such as the use of red ink, negative comments, comparison of writing with other students, and identification of all errors in the paper. Female students, on the other hand, reported preferences for practices deemed sound by Nicole and Macfarlane-Dick.

Zacharias (2007) conducted a mixed-methods study investigating students' and instructors' perceptions of instructor feedback. Zacharias surveyed 100 students and 20 teachers from writing courses in the English department at an Indonesian university. Zacharias also interviewed 21 students and 10 teachers from the participant pool. Zacharias identified a possible disconnect between students' and teachers' perceptions of the efficacy of feedback. On the one hand, teachers thought that students would improve

their skills if they studied the feedback. On the other hand, students did not consider the feedback helpful and therefore did not demonstrate skill development. Zacharias found that 95% of teachers and 93% of students believed feedback was “important” or “very important.” According to Zacharias, qualitative data from students indicated that this perception derived in part from the perception that teachers had higher English competence than students, and native English-speaking teachers were considered more trustworthy than nonnative speakers. According to Zacharias, students expressed mixed opinions on whether teachers or peers posed a greater threat to loss of face, which Zacharias noted as a serious concern in collectivist Indonesian culture. Another theme from the student data was that students value teacher feedback because teachers control grades. This finding raised concerns that students were prioritizing grades over learning. Qualitative data also indicated that too much feedback elicited feelings of annoyance and discouragement in students, whereas too little feedback elicited excitement and motivation. However, Zacharias observed that students’ perceptions of “too much” and “too little” were inconsistently defined. Students also expressed concerns about confusing codes and overly general feedback that did not facilitate the revision process. When analyzing teacher responses, Zacharias observed that teachers felt that diligent students were able to fix grammar errors based on general comments while less motivated students struggled to make these changes. On the other hand, Zacharias noted that students expressed concerns about fixing items not marked by instructors for fear of introducing errors that were not in the current draft. Zacharias concluded that teacher feedback should include training students in revision practices to enhance learning and

performance. Zacharias also noted that teachers should be mindful of students' English literacy level when providing feedback.

Student Perceptions of Written Versus Audio Feedback

Bilbro et al. (2013) conducted a mixed-methods study comparing students' perceptions of audio and written feedback. Bilbro et al. wanted to identify the types of students who preferred audio feedback and also wanted to describe the perceived benefits of audio feedback as reported by students. Bilbro et al. hypothesized that students who were invested in their writing, who wanted to receive more information about their writing, and who wanted useful information to improve their skills would prefer audio feedback. Bilbro et al. sampled 74 undergraduates taking a second-semester writing course at a large, private university in the South Central United States. Four instructors, including the three researchers, provided written feedback on the first essay, audio feedback on the second, and student's choice on the third. Students were asked to complete four questionnaires: one before the first essay, one after feedback on the first essay, one after feedback on the second essay, and one after feedback on the third essay. When providing written and audio feedback, instructors focused on macrolevel concerns such as content, organization, and structure. Bilbro et al. found that 49% of students preferred audio feedback, 38% preferred written, and 13% did not indicate a preference. Bilbro et al. also found that students who felt invested in their writing and had a positive relationship with their instructor preferred audio feedback. However, students who were not invested did not prefer audio feedback. Bilbro et al. discovered that students who did not find written feedback helpful nevertheless preferred to receive written feedback on

their second essays, which suggested that students with minimal investment in their writing development did not want audio feedback. In addition, Bilbro et al. found that students wanting more information about their writing did not prefer audio feedback more than written. Finally, Bilbro et al. found that students preferred the feedback type that focused primary attention on global rather than local concerns. However, students who wanted local concerns addressed preferred written feedback. Bilbro et al. concluded that instructors should provide students with both written and audio feedback and let students decide which type they prefer. Bilbro et al. noted that possible correlations between demographic factors and students' preferences were inconclusive. One concern with the study is that Bilbro et al. did not address how instructors' in-class relationships with students may have affected their perceptions of audio versus written feedback. In addition, Bilbro et al. did not address the possibility that the privileging of global feedback in both written and audio feedback may have influenced students' perceptions of these types. Finally, Bilbro et al. did not address how students in an online learning environment with limited access to instructors may perceive audio versus written feedback.

Bourgault, Mundy, and Joshua (2013) conducted a mixed-methods pilot study investigating nursing students' preferences for written versus audio feedback. Bourgault et al. also wanted to determine whether learning style influenced feedback preference, whether one method was more effective in meeting course objectives, and whether the time required to provide the feedback differed. Bourgault et al. sampled eight clinical nursing students from a university in the Southeastern United States. Over an 8-week

period, students received four audio and four written feedback treatments randomly assigned. Writing tasks included patient histories, nursing plans, focus notes, and related assignments. Written feedback included checkmarks, simple comments, and more detailed questions and suggestions as needed. Audio feedback followed the sandwich approach (positive→constructive→positive), and audio files were delivered via e-mail. At the end of the 8 weeks, students were asked to complete a questionnaire containing yes/no, Likert scale, and open-ended questions. Bourgault et al. did not find any statistically significant differences in students' preferences for audio versus written feedback, which was not surprising given the small sample. However, according to Bourgault et al. qualitative data indicated that most students perceived audio feedback to be more personal and constructive. Bourgault et al. did not find any significant difference in the instructor's perception of time required to provide each type of feedback. However, Bourgault et al. noted that on average audio feedback required two minutes more than written feedback. Bourgault et al. concluded that although audio feedback appeared to take more time, the learning benefits appeared to be worth it.

Ice et al. (2010) conducted a quantitative study measuring students' preferences for audio and text-based feedback. Ice et al. wanted to determine whether the perceived effectiveness of instructor feedback varied according to the type and level of feedback provided. Ice et al. sampled 196 graduate students enrolled in education programs in three U.S. universities. Instructors provided audio, video, and typed feedback throughout the semester, and students were asked to complete a survey indicating their preferences. Ice et al. found that students perceived stand-alone written feedback as more effective

than stand-alone audio feedback, but the combination of written and audio was considered most effective at all levels (global, mid, and micro). Ice et al. also learned that students preferred written feedback at the micro level more than the mid or global level. In addition, students considered audio feedback and combined written/audio feedback more effective at the mid and global levels. Ice et al. acknowledged the limitation of sampling only graduate students in education programs, which prevented generalization to undergraduates or students from other programs. Ice et al. also noted that the small percentage of nonnative English speakers limited generalizability to those students.

Sipple (2007) conducted a qualitative pilot study exploring students' attitudes toward written and audio feedback. Sipple asked 33 undergraduates in three sections of a developmental writing course to complete an anonymous questionnaire. In addition, 10 students agreed to be interviewed. Sipple used open-ended questions in the survey and interviews to explore students' perceptions of audio and written feedback delivered during the course. During the course, students had received audio commentary on two papers and written commentary on two other papers. The type of commentary given on specific assignments was deliberately not the same among the three sections to prevent assignment type from influencing students' perceptions of feedback type. Sipple found that 70% of students favored audio feedback on initial drafts. Students also reported that audio feedback improved their self-confidence, helped them internalize feedback, provided more detail than handwritten comments, reduced the likelihood of misinterpreting the feedback, enhanced the bond with the professor, and was more innovative and enjoyable to apply. In addition, Sipple found that 21% of participants

preferred written feedback and 9% preferred both types on each draft. Those who preferred written feedback reported that this type helped them find spelling and punctuation errors more easily. Sipple concluded that audio feedback may be more effective with developmental writers because it provides a better opportunity to comment on writing strengths and bolster students' self-confidence and motivation to improve their skills. Sipple acknowledged that the small nonrandom sample limited generalizability of findings. In addition, interview data may have been skewed by a disproportionate number of students expecting high grades in the course. In addition, Sipple noted the possibility of researcher bias inadvertently influencing students' reactions because the instructor was also the interviewer. Despite these limitations, Sipple concluded that the findings suggest audio feedback may improve student learning and increase the likelihood of students remaining in school.

Comparing Student and Instructor Perceptions of Written Versus Audio Feedback

Cavanaugh and Song (2014) conducted a qualitative case study examining students' and instructors' perceptions of audio and written feedback in online composition courses. Participants included four instructors and seven students from a large university in the Eastern United States. Instructors were asked to choose two major writing assignments and provide written feedback on one and audio feedback on the other. Students were asked to revise each paper and submit a final draft, and then were asked to complete a questionnaire containing nine Likert-scale questions and one open-ended question. Each student was interviewed after completing the survey. In addition, each faculty member was asked to complete two surveys, one addressing written

feedback and the other audio feedback. Cavanaugh and Song found that instructors experienced considerable technological problems implementing audio feedback, while students reported no problems. Students reported that the instructor's tone in audio feedback appeared more reassuring and personable than the tone in written feedback. Cavanaugh and Song also found that audio feedback tended to focus on global issues (content and organization) whereas written feedback tended to address local issues (grammar, punctuation, and spelling). One student noted that the lack of attention to local issues in audio feedback resulted in potentially avoidable deductions on the final draft. Cavanaugh and Song found that four of the seven students preferred audio feedback. Cavanaugh and Song also observed that students' revision methods seemed related to their preference. Students who preferred written feedback described the ease and effectiveness of addressing changes and comments one at a time, which was more difficult with audio feedback. Cavanaugh and Song noted that several instructors expressed reservations about the instructional efficacy of audio feedback. However, Cavanaugh and Song also noted that three of the four students who preferred audio feedback had instructors who did not. Cavanaugh and Song acknowledged that lack of training, inconsistencies in writing assignments, and the small sample limited generalizability of findings. Cavanaugh and Song concluded that online institutions should provide adequate training in audio feedback for instructors who are not able to attend face-to-face training sessions.

Student Perceptions of Written Versus Video Feedback

Silva (2012) conducted a mixed-methods study comparing students' perceptions of visual/audio feedback and Microsoft Word comments. Silva sampled 19 undergraduate engineering students taking a first-level writing course at the University of California, Santa Barbara. Silva provided visual/audio feedback via Camtasia software on one of two major essays written during the course. For the first essay, half of the students received video feedback and the other half received Word feedback. For the second essay, Silva provided the opposite feedback than was given on the first essay. After the course, Silva asked participants to complete two surveys: the first addressed their computer literacy, and the second addressed their attitudes toward the difference types of feedback. Silva found that students reported varying degrees of computer literacy. In addition, students reported that video feedback was more personable than Word feedback. Silva found that this perception was often based on the assumption that video feedback took longer to produce, when in fact it took an average of 10 fewer minutes. Students also reported that global issues such as content and organization were more effectively addressed via video feedback, whereas local issues such as grammar and punctuation were more effectively treated in Word feedback. Some students preferred Word feedback because it expedited the revision process, while aural and visual learners expressed a preference for video feedback. Supporters of video feedback also noted its conversational quality and ability to facilitate macrolevel revisions. Silva noted that visual/audio feedback may resolve the contiguity problem of audio feedback by providing a clear textual context for audio comments. Students did not report any comprehension problems with video or Word

comments. Overall, students recommended a combined approach that would yield benefits provided by both types of feedback. Silva agreed that this may be ideal; however, Silva also raised concerns about additional time required for instructors to provide both types of feedback. Silva suggested that instructors could customize feedback according to their students' preferences. In addition, Silva noted that video feedback could enhance teacher presence and improve social connection in the online environment.

Crews and Wilkinson (2010) conducted a mixed-methods study investigating undergraduate business students' preferences for auditory, visual, and written feedback. Crews and Wilkinson wanted to determine what students considered to be the most effective method of assessment feedback. Crews and Wilkinson sampled brick-and-mortar students under 23 years of age from five sections of an undergraduate business communication course; the exact number of participants was not provided. Crews and Wilkinson employed a web-based survey containing examples of different assessments including handwritten (HW), track changes (TC), audio/video via a personal computer (AV-Desktop), and audio/video with e-handwritten edits via a tablet computer (AV-Tablet). AV-Desktop and AV-Tablet feedback included audio and video segments of instructors explaining their changes. After studying the examples, students were asked to respond to eight Likert-scale questions and one open-ended question to report their opinion of each type of feedback. Crews and Wilkinson found that 49% of students chose AV-Tablet as the most helpful option, 29% chose AV-Desktop, 17% chose track changes, and 17% chose handwritten. However, most students reported that they agreed or strongly agreed that each type of feedback would improve their writing. Crews and

Wilkinson concluded that a multimodal approach accommodates multiple learning styles more effectively than an exclusively text-based or audio-based approach. However, Crews and Wilkinson expressed concern regarding the time required to deliver multimodal feedback, which echoed Silva's (2012) concern.

Comparing Student and Instructor Perceptions of Written Versus Video Feedback

Turner and West (2013) conducted a mixed-methods study investigating instructor and student perceptions of online video feedback versus written feedback at an Australian university. Turner and West were also interested in determining whether video feedback was a more efficient method of promoting student learning. Turner and West sampled students from a third-year undergraduate teacher-education course. All students received a video assessment of their assignment halfway through the course and also at the end of the course. Videos presented a live screen capture of the work being graded along with audio feedback from the instructor. Students were invited to complete a survey after each video assessment; 59 students responded after the first assessment and 31 after the second. Questionnaires were designed to elicit students' perceptions of the video feedback and compare it with written feedback. Both questionnaires included the same questions. Turner and West found that female students spent an average of 8 minutes reviewing the first video feedback, while male students spent 10 minutes. However, this time increased to 12 minutes for the second video assessment for both males and females. Turner and West also found that most students (75%) reported they would spend more time reviewing video feedback compared to written. This percentage increased to 77% for the second questionnaire. All students (100%) reported in the

second questionnaire that their understanding of video feedback was greater than or equal to written feedback. In addition, 92% of students in the first questionnaire indicated that video feedback was more valuable than written feedback, and 90% reported the same in the second questionnaire. In addition, 92% of students indicated that video feedback would help them improve their future work more effectively than written feedback. The same percentage reported that they would prefer video feedback compared to written. In addition, instructors reported that video feedback took the same amount of time to prepare as written feedback. Turner and West concluded that increased student engagement, enhanced personalization of feedback, improved understanding of feedback, and increased application of feedback indicated that video feedback provides an appealing alternative to written feedback in postsecondary education. Turner and West acknowledged that the novelty of video feedback might have influenced the findings and cautioned that further studies should be done to develop a flexible, efficient, and transferable model. Turner and West did not acknowledge that the small sample of education students limited generalizability of findings and did not address concerns about technology issues that might impede student access to video feedback.

Student Perceptions of Electronic Text-Based Feedback

Budge (2011) conducted a mixed-methods study investigating postsecondary students' preferences for electronic feedback. Budge hypothesized that millennial students would be receptive to electronic feedback because of their general affinity for technology in their daily lives. Budge sampled 69 students enrolled in undergraduate courses in both higher education (30%) and vocational training (70%) at a large urban

Australian university. Given the low percentage of hybrid courses offered at the university, Budge assumed most students were taking brick-and-mortar courses at the time of the study. Budge found that more students preferred private, face-to-face feedback (55%) or private handwritten feedback (27.5%) than private electronic feedback (13%). The percentages were very similar for feedback provided by peers or workplace supervisors. Budge also found that 12% of participants reported they had not experienced electronic feedback; those who did had received it primarily via e-mail (93%) or electronic notes in projects (33%). When analyzing qualitative data, Budge found that 43% of students indicated that electronic feedback was not clearer than verbal or handwritten, while 26% thought it was clearer. Participants also reported that they were more comfortable receiving electronic feedback from instructors than students. Budge concluded that students prefer detailed, personal feedback delivered privately and face to face. Budge acknowledged that electronic feedback may be limited in its ability to foster personal connection and facilitate dialogue between instructors and students. Budge also observed that students appeared to be receptive to electronic feedback used in conjunction with private, face-to-face feedback, but they did not value stand-alone electronic feedback. Budge also noted that creative projects in vocational programs may not lend themselves to electronic feedback and that further study of online students' preferences is warranted. Budge cautioned against making assumptions about students' preferences based on age or technological literacy.

McVey (2008) conducted a mixed-methods study exploring online students' preferences for inked (electronically handwritten) feedback delivered in a semi-structured

template via a tablet personal computer (PC). McVey hypothesized that the combination of inking and template feedback would be well received by students. McVey sampled 57 undergraduate students enrolled in an online senior seminar in child development at a public university in California. Most of the students (52) were female. At the beginning of the course, students were given a template containing a box for their personal goals, a box for copying and pasting their essay, and a checklist of guidelines for structure, content, analysis, and presentation. Students used this template when submitting six essays during the course. The template allowed the instructor to insert both generic and personalized comments using the inking feature of the tablet PC. McVey found that 84% of students considered inked feedback to be more personal than typed feedback. McVey also noted that many students liked the specificity of inked feedback delivered in the essay text as opposed to typed comments delivered at the end. This suggests that students may have had a limited view of typed feedback as occurring only at the end of essays rather than throughout. According to McVey, students reported that inked feedback conveyed the impression that the instructor spent significant time responding to the essay. In addition, most students (82%) reported that inked feedback helped them improve their writing skills. However, given the way in which inked feedback was used in conjunction with the template, it was not clear whether students preferred inked feedback separate from the template. McVey also noted that 50% of students expressed concerns regarding the legibility of inked feedback. Nevertheless, McVey concluded that inked feedback in a template appears to be a method valued by students.

Wolsey (2008) conducted a mixed-methods study investigating online students' preferences for electronic text-based feedback. Wolsey wanted to describe students' perceptions of instructor feedback and also identify the types of feedback students considered most useful. Wolsey sampled 25 graduate students taking online courses in a master's program in education at a large, private university. Wolsey examined the feedback given in students' papers, noting the use of a generic rubric and marginal comments inserted in the text. Wolsey constructed a typology of comments based on his observations. Examples included clarifications, simple affirmations, complex affirmations, questions, corrections, and so on. Wolsey used this typology when constructing survey questions. In addition, Wolsey interviewed four participants to describe their preferences in greater detail. Wolsey found that 67% of respondents considered feedback provided throughout their online program to be extremely useful or very useful. In addition, 100% reported that instructor feedback helped them improve their work on future assignments. All students reported that rubrics were useful, and 65% indicated that feedback was correlated with the rubric. Wolsey found that students preferred complex affirmations more than simple affirmations. Wolsey also found that most students (72%) preferred comments that were located in the essay text while 28% preferred both in-text and end comments. Wolsey acknowledged that the small, narrow sample and the researcher's role as instructor limited generalizability of findings. Despite these concerns, Wolsey concluded that online students value an interactive feedback process, detailed affirmations and questions, and comments embedded in the essay text.

The desire for an interactive feedback process echoed findings from Rae and Cochrane (2008) and Can (2009).

Student Preferences for Written Feedback

Tabatabaei and Ahranjani (2012) conducted a mixed-methods study investigating Iranian EFL students' preferences for written instructor feedback. Tabatabaei and Ahranjani compared preferences of 100 monolingual and 100 bilingual university students ages 18-30 who had passed an English essay-writing course. Tabatabaei and Ahranjani used a survey instrument containing open-ended, yes/no, and Likert-scale questions to identify students' preferences for written essay feedback. Tabatabaei and Ahranjani found the most monolingual students (71%) thought instructors should mark all major errors; however, only 32% of bilingual students took this position, and 55% reported that only a few of the major errors should be marked. Tabatabaei and Ahranjani also found that most monolingual students (74%) preferred corrections and comments; however, most bilingual students (75%) preferred error identification and reported that error correction with comments was their least favorite feedback type. Most monolingual students (66%) reported that every error should be marked, but 78% of bilingual students reported that only some errors should be marked. When asked which error types should be corrected, both monolingual and bilingual students reported a strong preference for grammar and vocabulary errors. Tabatabaei and Ahranjani concluded that monolingual students preferred more aggressive feedback intervention whereas bilingual students preferred less intervention. Tabatabaei and Ahranjani's findings suggest that awareness of students' English-proficiency levels and feedback preferences may influence

instructors' decisions regarding feedback type, which may improve the likelihood of enhancing students' skill development.

Ferguson (2011) conducted a mixed-methods study investigating brick-and-mortar students' preferences for the type, quality, and quantity of assessment feedback provided by instructors in higher education. Ferguson sought to identify students' preferences for instructor feedback to identify potential best practices that promote learning. Ferguson sampled 101 undergraduate and 465 graduate students from a pre-service education program at an Australian university. Students were asked to complete a survey questionnaire containing closed and open-ended questions. The anonymous survey was administered by a student roughly three fourths of the way through the course after students had been exposed to feedback and assessment. Participants were asked to consider their experiences outside of as well as within the course. Ferguson found surprisingly consistent results across degree levels and disciplines, with most students preferring brief comments throughout their essays and a summary comment at the end. Verbal group feedback was rated the least helpful. In addition, most students (63% undergraduate, 55% graduate) preferred personal comments addressing content rather than impersonal comments referring to grades or grading criteria. However, qualitative comments indicated a clear preference for both customized comments and criteria-oriented comments explaining how grades were determined. The former type was rated slightly higher because of its increased relevance to improving performance on future writing assignments. In other words, students linked personal comments to increased learning potential. In addition, most students preferred feedback on macro issues such as

content and structure rather than micro issues such as grammar and spelling. According to Ferguson, students preferred a higher volume of comments on weaker writing to justify the lower grade. However, students also warned against too much feedback that might be perceived as overwhelming. In addition, 90% of students insisted that a balance between positive and negative comments was preferable, and that exclusively negative feedback would cause them to ignore it. Students reported that positive comments should appear first, and all feedback should show how the writing could be improved. Most students reported that grading criteria should be clear and instructor feedback should be aligned with the criteria. Regarding turnaround time, students reported that 2-4 weeks was acceptable as long as feedback was returned before the next assignment was due. Ferguson observed that the acceptable length of time reflected students' sensitivity to instructors' workload. Students also reported that they did not mind the longer wait as long as the feedback was detailed and constructive. Ferguson also noted that many students called for greater consistency in feedback practices across the university. When addressing limitations of the study, Ferguson acknowledged that what students prefer may not necessarily be what is best for their learning. Ferguson might have also noted that results reflected brick-and-mortar students' preferences and that online students' preferences might be different, as Budge (2011) had pointed out. Ferguson was surprised by the fact that 50% of participants reported problems reading instructors' handwritten feedback. Although Ferguson did not speculate on the enhanced legibility of typed feedback, it seems logical that electronic feedback delivered via software applications would reduce the legibility problem noted in Ferguson's study. Ferguson also found that

several participants did not prefer electronic feedback but did not explain why. Given the type of feedback (handwritten) typically delivered to brick-and-mortar students in Ferguson's study, their discomfort with electronic feedback appears understandable. Budge (2011) noted similar findings in her study of traditional students' lack of interest in electronic feedback despite their comfort with technology in their everyday lives.

Smith (2008) conducted a mixed-methods study exploring students' preferences for graded feedback on writing assignments. Smith sampled 220 undergraduates taking a junior-level introductory marketing class at a Midwestern U.S. university. Smith used a questionnaire containing Likert-scale and open-ended questions asking students to report their preferences for three types of feedback: a matrix that rated individual elements of the essay, a paragraph identifying problems and suggesting improvements, and a paragraph identifying strengths and weaknesses. The survey also asked students to report their attitudes toward best practices for writing instruction as described in Smith's literature review. Smith found that 60% of students preferred the matrix method, while 36% preferred the paragraph describing strengths and weaknesses. Students reported that the matrix was easily understood and fair. Students described the second method, which identified problems and recommended strategies for improvement, as insensitive and discouraging. The third option received a more favorable response rate because it addressed both positive elements and areas for improvement. These findings were consistent with Ferguson's (2011) results. According to Smith, students also reported that they read instructor comments and found them useful in improving their writing skills. Smith noted that this finding contradicted the assumption that students do not pay

attention to instructor feedback apart from the grade, which Carless (2006) had also found. According to Smith, students' application of feedback privileged global rather microlevel comments. Smith concluded that instructors should use rubrics and avoid negative, judgmental comments. Smith also noted that further studies should be done on ways to improve students' receptivity to microlevel feedback addressing grammar, punctuation, and other mechanical issues.

Impact of Instructor Feedback on Student Learning

Several studies since 2004 addressed the impact of instructor feedback on student learning. Researchers measured the influence of written feedback (Carless, 2006; Duncan, 2007; Gallien & Oomen-Early, 2008; Sugita, 2006; Tuzi, 2004; Vardi, 2013) and focused more specifically on the impact of formative feedback (Mirzaee & Hasrati, 2014; Vardi, 2012; Wingate, 2010). Researchers also investigated the influence of rubric-articulated feedback (Nordrum et al., 2013; Panadero & Jonsson, 2013). Some studies addressed the impact of error correction in an EFL setting (Ali, 2011; Aliakbari & Toni, 2009; Boram, 2009) while others measured the impact of error labeling on the writing performance of native English speakers (Quible, 2006). Some researchers compared the impact of audio and written feedback in an EFL environment (Morra & Asis, 2009; Telceker & Akcan, 2010) while others did the same with native English speakers (Lunt & Curran, 2010). Researchers also analyzed samples of written instructor feedback and evaluated its perceived impact on student learning (Stern & Solomon, 2007; Szymanski, 2014; Walker, 2009). In the next section of the literature review, I summarize and compare studies addressing the impact of instructor feedback on student learning.

Impact of Written Feedback

Sugita (2006) conducted a quantitative study measuring the impact of three types of instructor comments on student revisions. Sugita wanted to determine whether imperative comments had a greater positive influence on revision quality than statements or questions. Sugita sampled 71 EFL students at a Japanese university. Students had demonstrated intermediate or pre-intermediate English proficiency levels and were enrolled in three Practical English courses. Students were asked to write three drafts of an opinion paper on an environmental or social problem. Instructors included marginal comments on the second drafts, which Sugita collected along with final drafts to analyze and compare the influence of comment types on revision quality. Each of the three participant groups received only one type of comment. Sugita found a significantly higher percentage of substantive improvements with imperative comments (46%) compared with statements (31%) and questions (20%). Sugita also found fewer "no change" effects with imperatives (8%) than with statements (28%) and questions (28%). Because each class received only one comment type, potentially confounding variables such as teacher quality and student grade level may have influenced the findings. However, Sugita ensured that the same comment text was used for each type and the same comment volume was given. In addition to measuring influences on revisions, Sugita asked students to rate the comment type on a 4-point scale ranging from strongly approve to strongly disapprove. Sugita found that significantly more students strongly approved of imperative comments (76%) than statements (46%) or questions (50%). Students were also invited to provide open-ended feedback on the comment type. Sugita

found that students considered imperative comments clear and authoritative while statements and questions were often viewed as confusing or providing minimal instruction. Sugita concluded that imperative comments appeared to be more effective in eliciting positive substantive changes in students' writing. Although Sugita did not address the relationship between students' attitudes toward feedback types and their performance when revising their essays, there appeared to be an association between students' preferred feedback forms and improved writing outcomes. Participants not only performed better when receiving imperative feedback, they showed a clear preference for this type. These results suggest that accommodating students' preferences may increase the likelihood of improving student performance outcomes. Sugita's findings were limited by the EFL participant sample in a Japanese educational context; nevertheless, the results warrant further study of the relationship between students' preferences and performance.

Tuzi (2004) conducted a mixed-methods study investigating the impact of peer and instructor electronic feedback on L2 student revisions. Tuzi sampled 20 L2 students taking a first-year composition course at a Pennsylvania college. Participants posted essay drafts to a website where they received peer and instructor feedback. Participants were allowed up to 10 days to revise their essays based on the feedback. Tuzi collected qualitative data from interviews and observations, and also conducted quantitative analyses of four of the six essays posted by participants. Tuzi provided L2 writers with training in the process approach to writing (brainstorming, organizing, drafting, and revising) and also in providing effective feedback as peer reviewers. Peer-response

training encouraged reviewers to respond to content in initial drafts and form in later drafts. Tuzi conducted in-class training sessions by reviewing sample peer comments on an overhead projector so participants could discuss the effectiveness of the feedback and learn how to provide quality comments. Using a multi-layered revision taxonomy addressing the time, level, type, and purpose of the revisions, Tuzi analyzed all drafts of a particular essay to determine the quantity and quality of revisions made. Tuzi also analyzed e-feedback using a rubric based on response analysis from a study by Stanley (as cited in Tuzi, 2004). Tuzi used this quantitative data when conducting interviews with L2 students and the instructor. Tuzi found that students produced an average of three drafts per essay. Tuzi also found that most changes (42%) were initiated by the writer rather than the reviewer or instructor. In addition, Tuzi found that changes at every level except punctuation were initiated by the writer. Although e-feedback did not play a primary role in revisions, it did influence the process by encouraging the addition of new information and by prompting clarifications at the sentence and paragraph levels. Tuzi found that although students reported a preference for oral feedback, they made more changes based on e-feedback. Tuzi acknowledged that students' familiarity with oral feedback may have influenced their stated preferences. Moreover, Tuzi acknowledged that the training received by peer reviewers may have influenced the revision patterns observed. Despite these concerns, Tuzi concluded that e-feedback constitutes an effective means of promoting writing development, but Tuzi also maintained that L2 instructors should provide feedback in a variety of ways whenever possible, including oral. Tuzi also noted the advantages of a web-based environment in giving and receiving feedback.

Vardi (2013) conducted a quantitative study measuring the impact of written feedback on related writing assignments. Vardi sampled 1007 students from a 2010 first-year business course and 1156 students from the 2011 course at a large Australian university. Students were asked to write two essays: an 1800-word research paper and a 1000-word critical business report based on the findings from the first paper. Feedback was designed to feed up toward specific assignment goals, back toward performance on the current assignment, and forward toward the next assignment. Tutors were trained to provide direct, prescriptive, clear comments that focused on global issues and linked structure with content. In addition, tutors were trained not to correct all errors or emphasize surface-level issues. Vardi found no significant difference in writing performance with the 2010 group; however, the 2011 group showed significant improvement. Vardi concluded that tutors' enhanced understanding of the second essay task helped them provide more detailed feed-forward comments in 2011 than in 2010. Vardi also surveyed students to determine their perception of the usefulness of the feedback. Vardi found that 80% of the students from 2010 and 81% from 2011 considered the feedback helpful to their learning outcomes. Vardi concluded that related assessment tasks allow for meaningful feed-forward comments that are useable for students. Vardi also noted that consistent performance standards and personalized feedback can increase the likelihood of students improving their writing on upcoming related assignments. Vardi noted that future studies should evaluate the impact of consistent, personalized feedback on unrelated writing tasks.

Duncan (2007) conducted a mixed-methods study measuring the impact of customized learning plans on student writing performance and exploring students' perceptions of instructor feedback. Duncan sampled 16 undergraduate students at a British university. Each student was asked to submit at least eight feedback sheets from previous assignments. Two staff members analyzed each student's sheets for recurring themes in formative feedback and then collaborated to reach consensus on prominent issues. Staff members used each student's feedback profile and assessment criteria for an upcoming assignment to develop individual learning plans for the participants. In addition, students were also provided with 1-hour tutoring sessions and a draft reading. Duncan found that participants scored higher on the upcoming assignment than students who did not participate in the program. Duncan also found that most of the participants earned a higher score compared to their previous assignment. However, when examining the students' overall grade histories, Duncan found that participants tended to have higher grade averages than nonparticipants, which indicated that high achievers had opted for additional support. Duncan was reluctant to generalize from the results given the small sample and confounding variables. Duncan also noted that identifying clear, formative feedback from previous assignments was challenging. During interviews, students reported that feedback was often specific to particular assignments and therefore not applicable to future assignments. According to Duncan, students also complained that instructor feedback was often vague, inadequate, or overly negative. Duncan noted that the small response rate (31%) for inclusion in the program was discouraging considering the efforts made to minimize additional time spent by students. Duncan concluded that

more formative assessment is needed to give students the opportunity to apply feedback to revisions of the same assignment and thereby internalize important principles that might be applied to future assignments.

Gallien and Oomen-Early (2008) conducted a mixed-methods study comparing students' performance in response to personalized versus collective feedback. Gallien and Oomen-Early also wanted to measure students' perceived connectedness to their instructors based on the feedback type and to compare the time required for instructors to deliver individual versus collective feedback. Gallien and Oomen-Early sampled 84 undergraduate students enrolled in four online health education courses at U.S. universities. Courses were randomly assigned to two treatment groups: personalized and collective. Although the content was different among the courses, the instructional design, teaching strategies, and assignment volume were the same. In the personalized courses, the instructor used a feedback taxonomy including corrective, informative, and Socratic comments to ensure consistency in feedback to students. In the collective courses, the instructor composed a 1-2 page single-spaced document summarizing well-written responses, common errors, misunderstandings, and suggestions for improvement. Gallien and Oomen-Early used a mixed-methods survey to investigate students' perceptions of their connectedness to the instructor and their satisfaction with the course and feedback type. Gallien and Oomen-Early also calculated the average percentage of each course based on final grades. Gallien and Oomen-Early found that students who received personalized feedback scored significantly higher and were more satisfied with the course and feedback than those who received collective feedback. However, no

significant differences were observed in students' perceptions of connectedness. Gallien and Oomen-Early also found that personalized feedback required roughly twice as much time to deliver on average. In addition, Gallien and Oomen-Early found that three times as many students in the collective group reported dissatisfaction with the quality and frequency of instructor feedback. However, the qualitative data also indicated that student satisfaction level depended more on course design and instructor availability than on feedback type.

Impact of Formative Feedback

Wingate (2010) conducted a mixed-methods study investigating the impact of formative assessment on writing skill development. Wingate sampled 68 undergraduates in a first-year linguistics course at a British university. Wingate wanted to determine whether formative assessment could be linked to improved writing performance. Wingate also wanted to identify reasons why students engaged or did not engage with formative feedback. As part of the course curriculum, students were asked to write an exploratory essay (EE) due Week 5, for which they received only formative feedback. In Week 6 students submitted a longer essay (A1) for which they received formative feedback during Week 10. Students were asked to apply all previous feedback when preparing their final essay (A2) due Week 12. Wingate coded feedback comments given in the three essays according to assessment criteria presented earlier in the course, and developed comment profiles for each student. In addition, Wingate used a survey to investigate students' preferences for the types of feedback given. Wingate found that students ranked formative assessment the highest. Wingate also interviewed 12 participants to explore

their perceptions of the feedback and their reasons for studying it or not. Wingate found that students who studied formative feedback showed greater reduction in critical comments in A2 than those who did not study the feedback. However, Wingate also observed discrepancies in feedback tone and style. High achievers often received supportive, mitigated comments whereas low achievers typically received negative, directive comments. Wingate acknowledged that these discrepancies may have influenced students' perceptions of the usefulness of the feedback and their self-efficacy as writers. Wingate also acknowledged that formative assessment was one of four methods used to promote writing development in the course. As a result, a link between formative assessment and writing performance could not be confidently established. Nevertheless, Wingate concluded that formative assessment appeared to be an effective means of promoting writing development. However, Wingate cautioned that formative assessment must be delivered in ways that do not discourage weaker writers from studying and applying it.

Vardi (2012) conducted a qualitative study investigating the impact of formative feedback on the content and mechanics of student essay writing. Vardi sampled four third-year undergraduates pursuing business studies at a large Australian university. Students were native English speakers from a cohort of more than 100 students who were asked to write three drafts of an essay comparing industrial relations practices in different countries. Students were given feedback on each draft and were provided with assignment guidelines, writing strategies, and sample essays. Vardi analyzed each draft for coherence, citations, academic style, mechanics, and adherence to assignment

expectations. Vardi found changes in coherence, in-text citations, and satisfaction of assignment expectations but did not find significant changes in academic style, mechanics, or reference citations. Vardi observed noticeable improvements in macrolevel items such as content and organization including the enhancement of introductions and conclusions and the improvement of paragraph design and connections among paragraphs. Vardi noted that formative feedback was most beneficial when it prescribed methods for linking structure and content. Vardi also found that feedback was most often incorporated when it targeted a specific issue. Vardi concluded that personalized feedback provided over several drafts can improve performance in targeted areas. Although Vardi described the feedback as prescriptive, Vardi did not explain the ways in which feedback was provided (e.g., electronic, handwritten) and did not describe the tone used.

Mirzaee and Hasrati (2014) conducted a qualitative study investigating the influence of formative written feedback on nonformal learning. Mirzaee and Hasrati used Eraut's definition of *nonformal learning* as "a type of learning that does not follow from formally organized learning programs or events" (p. 556). Mirzaee and Hasrati sampled four students in a Teaching English as a Foreign Language (TEFL) master's program at a public university in Iran. Students were purposefully selected based on their high grade point average from previous semesters. Mirzaee and Hasrati speculated that feedback would promote nonformal learning and that motivated students would act on the feedback received. During one semester, students were asked to summarize journal articles each week and apply instructor feedback to subsequent assignments. Mirzaee and Hasrati

collected the essays containing instructor feedback and interviewed the students to identify their perceptions of the feedback and what they thought they had learned from it. According to Mirzaee and Hasrati, students reported that instructor feedback instigated peer discussion, which promoted reactive learning (spontaneous nonformal learning motivated by a problem at hand). Mirzaee and Hasrati explained that instructor feedback motivated students to scaffold each other and thereby engage in nonformal learning. According to Mirzaee and Hasrati, students also reported that they experienced deliberative nonformal learning by discovering the Western notion that speakers and writers assume the burden of clarity in communication. This cultural revelation raised participants' awareness of the need to accommodate readers' expectations. Mirzaee and Hasrati noted that the theme of raised consciousness featured prominently in the data, as students frequently reported increased sensitivity to their responsibilities as writers in a scholarly Western context. Mirzaee and Hasrati concluded that written instructor feedback can facilitate nonformal learning by inspiring students to engage in both spontaneous and deliberative acts to interpret and comprehend messages given by instructors. Mirzaee and Hasrati also concluded that formative feedback provided throughout the semester is more likely to promote nonformal learning that summative feedback provided at the end. Although Mirzaee and Hasrati did not acknowledge the study's limitations, the small sample and selective sampling of students with high achievement motivation limited generalizability of findings.

Nordrum et al. (2013) conducted a qualitative study investigating students' perceptions of in-text comments and rubric-articulated feedback with an eye toward

understanding how the formative feedback process could be improved. Although each feedback method was used for summative purposes within the course, Nordrum et al. emphasized the formative influence of the feedback methods both within the course and also feeding forward to future writing assignments. Nordrum et al. used an action research model soliciting students' perspectives in order to optimize formative feedback practices based on the study's findings. Nordrum et al. sampled 54 students in a first-year writing course at a technical university in Sweden. Nordrum et al. asked students to write two essays: a single-draft compare-and-contrast paper and a multiple-draft descriptive essay. Nordrum et al. provided both in-text comments and rubric-articulated feedback on the first essay. Comments included editing symbols, marginal notes, and a summary paragraph. Rubric feedback indicated subgrades for structure, mechanics, and content and also a final grade. Students were asked via questionnaires and interviews to describe how the feedback was useful to them or not. According to Nordrum et al., students reported that rubric-articulated feedback helped them understand the general issues with their writing and also techniques for approaching future writing assignments. In-text comments, on the other hand, were perceived as error oriented despite instructors' efforts to address both lower and higher-order issues. Students also reported that in-text feedback served a corrective function whereas rubric feedback addressed achievement level. In addition, most students reported that rubric feedback was not as useful as in-text feedback. However, Nordrum et al. noted that the phrasing of certain questions might have influenced students' preference for in-text comments whereas different phrasing might have revealed a preference for both types, which was indicated in other qualitative

data. Nordrum et al. observed that in-text comments increased the risk of students' negative responses caused by face-threatening correction, whereas rubric feedback limited the risk of a potentially counterproductive affective influence. Nordrum et al. also noted that students' responses indicated that a combination of the two types of feedback appeared to enhance students' perceived self-efficacy. Nordrum et al. concluded that a combination of the two types is ideal and suggested that rubric feedback might work best in early and final drafts whereas in-text feedback would be best in intermediate drafts. Nordrum et al. acknowledged that the small sample and researchers' role as instructors limited generalizability of findings.

Panadero and Jonsson (2013) conducted a meta-analysis of studies addressing the impact of rubrics on writing development. Panadero and Jonsson focused specifically on the formative application of rubrics in promoting writing skill development. Panadero and Jonsson wanted to identify the factors, either positive or negative, that influenced the effects of rubrics used formatively. Panadero and Jonsson selected 17 empirical peer-reviewed studies that addressed formative application of rubrics. Panadero and Jonsson conducted a qualitative rather than quantitative analysis due to the small number of studies as well as their heterogeneity. Panadero and Jonsson identified several ways in which formative application of rubrics mediated students' writing performance, including increased assessment transparency, reduced student anxiety, improved feedback process, increased student self-efficacy, and enhanced student self-regulation. According to Panadero and Jonsson, some researchers found that students reported improved understanding of assignment expectations from formative rubrics. Students also reported

increased awareness of how they would be evaluated. Panadero and Jonsson also found that formative rubrics enhanced the feedback process by clarifying areas that needed improvement. In addition, Panadero and Jonsson found that some studies indicated that formative rubrics enhanced self-efficacy by promoting self-assessment and self-regulation of the writing assignment, which could be completed in stages following the rubric guidelines. Panadero and Jonsson acknowledged the limitation that studies reporting positive influence of formative rubrics did not always control for other interventions that may have influenced students' performance.

Impact of Error Correction

Aliakbari and Toni (2009) conducted a quantitative study comparing the impact of different types of error-correction techniques on postsecondary EFL students' grammatical accuracy. Aliakbari and Toni sampled 60 upper-intermediate Iranian students ages 21-25. Aliakbari and Toni used two experimental groups, one receiving indirect coded feedback and the other indirect uncoded feedback, and a control group receiving direct feedback, which was the most common method used among Iranian EFL instructors. Indirect feedback involved highlighting errors but not correcting them. Coded feedback included grammar codes that provided clues for correction. Aliakbari and Toni used a pre- and post-test to measure students' grammatical proficiency before and after eight sessions of feedback treatment. Pre-test scores indicated no significant differences among the three groups in grammar proficiency, which indicated that selection bias was controlled. Aliakbari and Toni found that all three groups showed improvement in mean scores on the post-test. However, results from *t* tests showed that participants receiving

indirect coded feedback scored significantly higher on the post-test compared to those receiving indirect uncoded and direct feedback. Aliakbari and Toni concluded that English teachers should implement indirect coded feedback as the preferred method of promoting students' grammatical competency. However, Aliakbari and Toni did not acknowledge the limitations of the study, including the narrow sample of Iranian EFL students. In addition, Aliakbari and Toni did not seek to explain why a medium-level scaffolding intervention (indirect coded) worked more effectively than a high-level (direct) and low-level (indirect uncoded) intervention with upper-intermediate EFL students. Aliakbari and Toni might have called for further research comparing different types of feedback on students with different levels of grammatical proficiency, as Boram (2009) did.

Boram (2009) conducted a quantitative study comparing the effects of direct and indirect error-correction on L2 learners' writing development. Boram wanted to compare the impact of direct and indirect feedback on treatment versus control groups. Boram also wanted to compare the impact of direct and indirect feedback on students at different L2 proficiency levels. Boram acknowledged problems with previous studies on corrective feedback resulting from inconsistent research designs. Boram sought to address these inconsistencies by implementing control groups and requiring participants to demonstrate learning on new writing assignments rather than revising previous assignments. Boram sampled 135 EFL students taking a first-year English course at a Korean university. Experimental groups included two beginner classes and two intermediate classes; control groups included one class from each level. One beginner group and one intermediate

group received direct feedback, and the second beginner and intermediate groups received indirect feedback. One instructor taught all three classes at the beginner level, and a second instructor taught the three classes at the intermediate level. Both instructors used the same curriculum. Experimental groups received feedback on content and grammar, while control groups received feedback on content only. Direct feedback included both corrections and comments explaining the corrections. Indirect feedback highlighted errors and included grammar codes identifying the error type. Boram conducted ANOVAs to confirm no significant differences in pre-test scores among the three classes at the same level. Boram also collected data on pre- and post-tests to evaluate the impact of direct and indirect feedback, using ANOVAs to test for differences in accuracy percentages of verb tense usage. Boram found that all six groups showed significant improvement from pre- to post-test. Boram also found that the beginner direct group showed much greater improvement compared with the beginner indirect and beginner control groups. In addition, the intermediate direct and intermediate indirect groups outperformed the control group, but no significant difference was observed among the experimental groups. Boram concluded that direct feedback was more effective than indirect for the beginner group, while the intermediate group was able to show comparable improvement with direct and indirect feedback. Boram's findings seem consistent with Tabatabaei and Ahranjani's (2012) results, which indicated that students with a lower level of proficiency require a higher level of instructor intervention to promote skill development.

Ali (2011) conducted a mixed-methods study to describe Pakistani instructors' approaches to feedback in an ESL environment. Ali also wanted to learn how ESL students responded to feedback on first drafts and why direct and indirect feedback may have a different impact on surface-level errors such as grammar, punctuation, and spelling. Ali investigated 10 ESL instructors' preferences using a survey modified from the Survey of ESL Students' Preferences for Error Correction developed by Leki (as cited in Ali, 2011). However, Ali did not include the survey instrument and did not explain how it constituted a valid and reliable measure of teachers' preferences. Ali found that all teachers responded to more surface-level errors on the final draft than on the first draft. Most teachers (90%) reported that they preferred to correct only errors that impeded communication in first drafts. In addition, all teachers reported that they explained proofreading symbols to students during the feedback process. However, opinions regarding the use of red ink were mixed, with half of teachers supporting it and the other half opposing it. Ali also discovered considerable variation in the type of feedback given to students. Ali concluded that ESL instructors should strive for greater alignment of feedback techniques. Ali also recommended that teachers should explore their students' attitudes toward error correction, and teachers should explain the purpose of their feedback approach at the beginning of the course. Although generalizability of Ali's findings was limited by the small sample, Ali's call for enhanced instructor awareness of students' preferences echoed findings from McVey (2008), Rae and Cochrane (2008), Schulz (2001), Tabatabaei and Ahranjani (2012), and Weaver (2006).

Quible (2006) conducted a quasi-experimental study measuring the effect of error labeling on postsecondary students' writing performance. Quible sampled students from his business communications course; the control group comprised 123 students from previous semesters, and the experimental group comprised 48 students from the current semester. Quible wanted to determine whether labeling grammar errors in remedial exercises enhanced students' writing performance more effectively than correcting errors without labeling them. Quible found that students from the control and experimental groups showed statistically similar scores on the first business letter, which allowed Quible to measure the impact of error labeling on students' performance on the last business letter. Quible found that students who labelled and corrected errors in remediation exercises committed significantly fewer sentence-level errors on the final business letter compared to those who only corrected errors in the exercises. Quible concluded that error labelling appeared to be a valid means of promoting students' ability to detect and fix grammar and punctuation errors on their own. Quible also reported that anecdotal evidence from students' comments indicated that many experienced enhanced self-efficacy as writers as a result of taking the course. Although Quible did not investigate students' preferences for error labeling, the anecdotal evidence suggests that error labeling was perceived to be a desirable intervention. The positive influence of error coding was also observed in Aliakbari and Toni's (2009) study. However, in that study instructors inserted the grammar codes whereas in Quible's study students inserted the codes.

Impact of Audio Versus Written Feedback

Morra and Asis (2009) conducted a quantitative study measuring the impact of audio and written feedback on EFL students' error correction. Morra and Asis hypothesized that audio feedback would be more effective at the macro level and written feedback would work better at the micro level. Morra and Asis sampled 89 undergraduate students in a college in Argentina. Three groups were enrolled in a teacher-training program and three in a translation studies program. Each program included two experimental groups (audio and written) and a control group. Instructors provided audio feedback via tape cassette and written feedback via marginal and end comments. Each student wrote three drafts of a short opinion essay. Instructors, who had received training on the taxonomy of errors, provided macro feedback (content, organization) on the first draft and both macro and micro (grammar, punctuation, spelling) on the second draft. Control groups did not receive feedback except for general encouragement to revise their work. Morra and Asis examined essays for error reduction and also surveyed participants to explore their reactions to the feedback. When analyzing macro and micro errors in the first draft and final draft, Morra and Asis coded comments based on a 19-item taxonomy. Morra and Asis found significant reductions in both macro and micro errors in all groups except the translation studies group that received audio feedback. In addition, most students expressed a preference for the type of feedback they received. Morra and Asis concluded that the sample of highly motivated prospective teachers likely influenced the findings, as evidenced in the error reduction in the control groups. Morra and Asis concluded that findings may not be generalizable to other groups of EFL students or to

native speakers. Morra and Asis also acknowledged the limitation of not providing each experimental group with both types of feedback, which would have given students an opportunity to compare the types.

Telceker and Akcan (2010) conducted a quantitative study to measure the influence of oral and written feedback on EFL students' revisions. Telceker and Akcan also wanted to explore students' perceptions of each type of feedback. Telceker and Akcan sampled 16 undergraduate students in an English preparatory program at a university in Istanbul, Turkey. Telceker and Akcan collected data from the intermediate and final drafts written in the final 2 weeks of a 14-week course. Students received written feedback on both the first and second drafts and oral feedback on the second draft. Written feedback included underlining errors and providing grammar codes to identify the error type. Oral feedback was provided in teacher-student conferences. Both types of feedback addressed mechanics and content. Telceker and Akcan measured the differences in errors between first and second drafts to determine the impact of written feedback. To measure the influence of oral feedback, Telceker and Akcan measured the difference in errors between the second and final drafts. Telceker and Akcan invited colleagues to assist as interraters to confirm the accuracy of error coding. Telceker and Akcan also used published coding schemes to enhance internal validity. Telceker and Akcan found that written feedback positively influenced grammar correction but had less influence on content revision. Oral feedback was shown to have the same effect: significant impact on grammar but less noticeable impact on content. Telceker and Akcan concluded that both feedback types can benefit EFL learners' writing skill development.

Moreover, Telceker and Akcan did not report a significant difference in students' preferences for oral versus written feedback. Generalizability was limited by the small sample of EFL students and the fact that the researcher was also the instructor. Also, the measured impact of oral feedback may have been influenced by the additional written feedback provided on second drafts.

Lunt and Curran (2010) conducted a mixed-methods study to determine whether audio feedback improved the efficiency of feedback from the instructor's perspective and the quality of feedback from the student's perspective. Lunt and Curran's sample included two instructors and 26 undergraduates from a British University. Lunt and Curran asked the instructors to write feedback as they normally would on students' assignments. Then Lunt and Curran asked instructors to prepare audio files of their feedback. Lunt and Curran compared the time required for each type and found that audio feedback required significantly less time (5 minutes compared to 30). However, Lunt and Curran did not examine how the preparation of written feedback might have decreased the time needed to prepare the audio feedback. Also, Lunt and Curran did not explain what types of writing issues were addressed in the audio and written feedback. Lunt and Curran found that instructors perceived audio feedback to be more efficient than written. Lunt and Curran also conducted a survey containing Likert-scale questions and an open-ended question exploring students' perceptions of the feedback. Lunt and Curran found that most students (65%) preferred audio feedback. However, Lunt and Curran did not explain whether written and audio feedback targeted the same issues (e.g., content, organization, mechanics, etc.). Also, Lunt and Curran did not account for the possible

institutional bias against written feedback, which typically took several weeks to be returned and was apparently seldom read by students. The small sample and possible experimenter bias limited generalizability of Lunt and Curran's findings.

Analysis of Instructor Written Feedback and Its Perceived Efficacy

Stern and Solomon (2007) conducted a qualitative study to describe the content of instructor feedback on student writing assignments and to determine whether instructors were following recommended principles such as positive feedback, selective marking tied to learning goals, and identification of patterns of strengths and weaknesses. Stern and Solomon's university-wide assessment was done to determine how effectively the Midwestern U.S. university's educational practices were promoting student learning. Stern and Solomon sampled 30 student portfolios randomly selected from across the university and analyzed 598 graded papers from the portfolios. Stern and Solomon noted that only 32% of the papers were from English courses, indicating a diverse disciplinary sampling. Students volunteered to have their work collected, and they submitted each assignment from every course taken. Stern and Solomon used their 23-item taxonomy when coding faculty comments and established coding rules to ensure accuracy and consistency. Stern and Solomon found that most comments focused on microlevel issues with very little attention to ideas. In addition, most comments were negative. No significant differences were noted between English and non-English courses. Stern and Solomon concluded that instructors were not following principles of effective feedback and that greater effort should be made at the university to promote best practices for writing instruction.

Szymanski (2014) conducted a qualitative study of instructor feedback given to upper-division biology students at Washington State University. Szymanski coded instructor comments from 237 randomly selected writing assignments using the taxonomy from Straub and Lunsford's *12 Readers Reading*. Of the 1950 comments identified, 44% focused on lower-order issues such as grammar and punctuation, 14% addressed scientific writing conventions, 27% targeted content issues, 6% addressed organization, and 8% offered praise. Szymanski found that most instructors used conventional assignments and provided directive feedback on lower-order issues. These findings echoed Stern and Solomon's (2007) results. However, Szymanski also found that a minority of instructors designed assignments to mimic actual writing done in the scientific disciplines. Szymanski found that these instructors provided twice as much facilitative feedback to prepare students for professional writing. Szymanski requested interviews with all instructors, but only five agreed. Szymanski noted that these five were the ones who used professional-genre assignments and provided higher-order feedback. Analysis of interview data yielded five themes: Writing is a process involving revision, academic writing should be connected to professional writing, good writing is related to good thinking, writing assignments require significant time and warrant considerable grade value, and feedback should address scientific thinking while not ignoring mechanics. Szymanski concluded that assignment design and feedback style were aligned, noting that instructors who chose professional-genre assignments also provided higher-order feedback to prepare students for writing done in their field, while instructors who chose conventional assignments provided lower-order feedback.

Walker (2009) conducted a qualitative study examining the written feedback given to undergraduate students at the Open University in the U.K. Walker sampled 106 marked papers randomly selected from three technology courses. When coding comments, Walker used Brown and Glover's (2006) taxonomy, which included category (e.g., content, skills development, motivation) and depth (e.g., indication, correction/amplification, explanation). Walker also had two associate lecturers conduct interviews with 43 students to identify which types of comments they considered useful. Walker analyzed interview data for themes and also compared themes to comments given in papers. Walker found that 41% of comments addressed content, 21% addressed skill development, and 32% were motivating. When analyzing skill development comments, Walker found that 79% were corrections, 13% were explanations, and 8% were indications. When analyzing motivating comments, Walker found that 56% were amplification, 33% were indication, and 11% were explanation. During interviews, students were asked whether comments helped them in subsequent assignments; 67% answered that comments were either "a lot of" or "some" help, while 33% reported that comments were "not much" or "not at all" helpful. When analyzing other interview data, Walker found that students were most often confused by content and motivating comments. Walker also found that explanatory comments were rarely considered confusing and often rendered content or skill development comments more useful. Walker also found that students considered skill development comments more useful than content and motivating comments in improving performance on future assignments. Overall, students expressed interest in learning what they had done wrong, why, and how

they could fix it in future work. Students also appreciated praise as long as it was not confusing. Walker concluded that instructors should increase the use of skill development and explanatory comments to facilitate learning.

Summary and Conclusions

Of the nearly 50 empirical studies examined in this literature review, only four addressed online students' preferences for instructor feedback (Cavanaugh & Song, 2014; Gallien & Oomen-Early, 2008; McVey, 2008; Wolsey, 2008). Cavanaugh and Song (2014) compared audio versus written feedback, and Gallien and Oomen-Early (2008) examined personalized versus collective feedback. McVey (2008) addressed inked (electronically handwritten) feedback but did not address typed electronic feedback. Wolsey (2008) investigated student preferences for text-based feedback delivered via word-processing applications, but Wolsey's sample was small and his results were limited by his relationship with his participants as their instructor. None of the studies addressing online students included a large sample that would permit generalizable results of postsecondary online students' preferences for electronic feedback delivered via software applications such as Microsoft Word. Despite the encouraging results from studies done on audio and video feedback, instructors in the online environment appear to privilege text-based feedback as their primary means of promoting students' writing skill development (Wolsey, 2008). Researchers have noted that online students' preferences are likely different from brick-and-mortar students' preferences and that studies should be done to describe online students' preferences so that instructors might accommodate their learning needs more effectively (Budge, 2011; Ferguson, 2011).

Precedent for a Mixed-Methods Approach

Many researchers investigating student perceptions of instructor feedback used a mixed-methods approach combining survey questionnaires and interviews (Can, 2009; Carless, 2006; Hounsell et al., 2008; Weaver, 2006; Wingate, 2010; Zacharias, 2007). This approach allows for triangulation of data from participants' responses to closed, open-ended, and oral questions. Other researchers used only a survey containing closed and open-ended questions (Ali, 2011; Amrhein & Nassaji, 2010; Bilbro et al., 2013; Bourgault et al., 2013; Budge, 2011; Crews & Wilkinson, 2010; Ferguson, 2011; Gallien & Oomen-Early, 2008; Lunt & Curran, 2010; McVey, 2008; Silva, 2012; Smith, 2008; Tabatabaei & Ahranjani, 2012; Turner & West, 2013). The inclusion of interview data allows for deeper probing of online students' preferences and enables a more compelling profile of their perspectives (Patton, 2002). In Chapter 3, I describe the research methods for my study in detail.

Chapter 3: Research Method

The purpose of this sequential explanatory mixed-methods study was to describe postsecondary online students' preferences for instructor feedback delivered electronically via software applications such as Microsoft Word and to describe the reasons for students' preferences. In Chapter 3, I explain the setting, research design and rationale, role of the researcher, and methodology including participant selection, sampling strategy, instrumentation, and data analysis strategies. I also address validity threats and ethical considerations of the study.

Setting for Study

I collected survey and interview data from undergraduate and graduate students attending a large private university in the Midwestern United States. At the time of the study, nearly 48,000 students were enrolled in the private university's online programs. Because participants were matriculated in online programs and completing course work from various locations around the world, there was no physical setting for the study. This was appropriate because the study's purpose was to describe postsecondary online students' preferences for instructor feedback delivered electronically. Survey data were collected online via Survey Monkey, and interviews were conducted via telephone.

Research Design and Rationale

This study was conducted to answer the following research questions:

1. What types of electronic feedback in word-processing software do postsecondary online students prefer?

2. What reasons do postsecondary online students give for preferring certain types of electronic feedback but not others?

A sequential explanatory mixed-methods approach was appropriate for describing postsecondary online students' preferences for instructor feedback and the reasons for their preferences. As described in Chapter 2, many researchers who investigated students' preferences for instructor feedback employed a mixed-methods approach using survey questionnaires and interviews (Can, 2009; Carless, 2006; Hounsell et al., 2008; Weaver, 2006; Wingate, 2010; Zacharias, 2007). Several other researchers used a survey questionnaire containing closed and open-ended questions (Ali, 2011; Amrhein & Nassaji, 2010; Bilbro et al., 2013; Bourgault et al., 2013; Budge, 2011; Crews & Wilkinson, 2010; Ferguson, 2011; Gallien & Oomen-Early, 2008; Lunt & Curran, 2010; McVey, 2008; Silva, 2012; Smith, 2008; Tabatabaei & Ahranjani, 2012; Turner & West, 2013). Based on the precedent for a mixed-methods approach in the research literature, employing a survey questionnaire with closed and open-ended questions and conducting interviews to enhance the thick, rich description of postsecondary online students' preferences was appropriate. Both quantitative and qualitative data were needed to answer the research questions addressing students' preferences for electronic feedback and the reasons for those preferences.

I implemented the survey questionnaire and interviews sequentially to answer my research questions. Initially I gathered quantitative and qualitative data concurrently via closed and open-ended survey questions. To answer my research questions, I reported descriptive frequencies from responses to quantitative survey questions and analyzed

emerging themes from responses to qualitative survey questions, following recommendations from Miles, Huberman, and Saldana (2014). I compared quantitative and qualitative data from the survey questions using a social-constructivist lens to analyze similarities and differences. I also conducted follow-up interviews with four volunteer participants from the survey pool to probe student preferences more deeply (Patton, 2002) when answering both research questions. Analysis of qualitative data from open-ended survey questions and interview questions yielded a rich, texturized description of students' preferences (Maxwell, 2013; Miles et al., 2014) to augment the quantitative findings.

Alternative Research Methods

I originally considered a case study of 15 to 20 online students to describe their preferences for electronic feedback. However, after reading the key studies by Wolsey (2008) and Budge (2011), who had conducted mixed-methods studies investigating postsecondary students' preferences for electronic feedback, I decided a case study was not appropriate. Wolsey surveyed online students, but his sample was small (25) and narrow (students in master's programs in education). Budge sampled a larger group (69) but surveyed only undergraduates from brick-and-mortar programs; in addition, 70% of participants were matriculated in vocational training programs, which further limited Budge's findings. I wanted to conduct a large-sample study containing both undergraduate- and graduate-level online students to produce a generalizable description of their preferences for electronic feedback. A mixed-methods approach seemed appropriate based on my research questions and the precedent set by Budge and Wolsey.

I also considered a phenomenological approach but rejected it because my purpose was not to explain the essence of participants' shared experience (Creswell, 2013). Instead, I wanted to describe students' preferences and the reasons for their preferences. Although I embraced the phenomenologist's intent to bracket my personal experience (Creswell, 2013; Patton, 2002), my research questions called for a mixed-methods approach.

Role of the Researcher

I bracketed my personal experience when conducting surveys and interviews (Patton, 2002). I did not expect to have personal or professional relationships with prospective participants from the private university. However, due to my employment status there, I may have had unanticipated prior relationships with participants. The survey questionnaire was anonymous, so potential preexisting relationships with participants were not discoverable by me and did not affect my analysis of the survey data. If I received interview requests from participants with whom I had professional relationships, I declined their requests. Given the significant volume of prospective participants from the research site, the likelihood of known participants volunteering for interviews was minimal. The study was not intended to benefit the university in any way other than assisting faculty and students in improving the writing feedback process. No financial or other incentives were offered to prospective participants.

I endeavored to maintain strict objectivity when collecting, organizing, and analyzing quantitative and qualitative data. I was mindful of expectations I may have had regarding potential findings based on my previous experiences as a writing instructor and

from studies done by other researchers. I recorded interviews to ensure that complete transcripts of participant responses were available for data analysis, and I asked interview participants to confirm the accuracy of my transcriptions and my interpretations of findings. I examined all qualitative data for emerging themes and analyzed outlier data for possible inconsistencies.

Methodology

In the following section, I explain participant selection, instrumentation, data collection, and data analysis strategies for the study.

Participant Selection

My sample size depended on the number of students who chose to complete the online survey and participate in the interviews. I followed IRB regulations when soliciting survey feedback with the intent of collecting 300 to 400 responses. According to Teddlie and Tashakkori (2009), a population of infinite size required a sample of 384 to achieve a 95% confidence rate for representativeness. At the private university, I presented my survey via the participant pool website. Participants were required to register in the participant pool before locating my study and completing the survey. The institution's IRB did not permit direct solicitation of student participation.

Sampling Strategy

I employed a convenience sampling strategy by targeting undergraduate and graduate students pursuing degrees at the private university. Only students in online programs were eligible to complete the survey and participate in interviews. I attempted to ensure adherence to this sampling criterion by soliciting responses from students in

online programs and by asking participants to confirm their status as online students when providing their informed consent. Students chose to participate or not, so the selection process was not random. However, I hoped to collect data from a wide range of students from various academic disciplines and grade levels to promote heterogeneity in the sample, which would allow me to identify patterns from maximum variation (Patton, 2002). I included survey questions asking participants to report their grade level and area of study to confirm heterogeneity of the sample. A large, diverse sample would allow me to report generalizable preferences of the participants (Maxwell, 2013). Survey data were collected via Survey Monkey, and participants' informed consent was obtained at the beginning of the survey. Participants who did not affirm their consent were asked not to participate in the survey.

In addition to conducting an anonymous online survey, I interviewed four participants who had completed the survey and who had agreed to participate in follow-up interviews. Participants were asked to identify their willingness to be interviewed when they completed the survey. I employed a maximum-variation sampling strategy (Patton, 2002) when choosing interviewees based on their response to a survey question regarding their degree program. Informed consent for participation in the interviews was obtained via e-mail prior to conducting the interviews. Interview data allowed me to augment survey findings with a thick, rich description of preferences from students matriculated in different degree programs, which allowed me to describe their unique circumstances and identify shared patterns (Patton, 2002).

Instrumentation

I employed a survey instrument containing 17 quantitative questions and two qualitative questions (Appendix A). I used Survey Monkey when soliciting feedback from participants online. The first 12 quantitative questions addressed students' preferences for online feedback delivered via software applications such as Microsoft Word. Seven of those questions contained Likert-scale responses, four were multiple choice, and one was yes/no. The final five quantitative questions elicited demographic information regarding participants' age, grade level, online experience, English-language status, and area of study. Age ranges included in the survey question were based on those used by Clinefelter and Aslanian (2014) in their comprehensive survey of online students' preferences for field of study, payment options, proximity to location of enrollment, and other factors. The first 12 quantitative questions were intended to answer the first research question addressing postsecondary online students' preferences for instructor feedback delivered via word-processing software applications. The two qualitative questions were intended to answer the second research question addressing the reasons why students prefer specific types of feedback. The final five quantitative questions were included to collect demographic information to confirm heterogeneity in the sample.

The quantitative survey questions addressing students' feedback preferences were modified from surveys used by Budge (2011) and Wolsey (2008). I obtained permission to use adapted questions prior to submitting the IRB application (Appendix C; Appendix D). Budge investigated Australian brick-and-mortar students' preferences for electronic

feedback, and Wolsey investigated online graduate students' preferences for electronic feedback. Budge sampled 69 students, and Wolsey sampled 25 students. Budge and Wolsey developed their own survey questions and did not explain how the validity of their survey instruments was established. Survey questions used by Budge and Wolsey were appropriate for my study because I was investigating online students' preferences for instructor feedback delivered electronically. However, my sample was larger than those used in the previous studies.

I also conducted interviews with four participants who volunteered after completing the survey. Interview questions are presented in Appendix B. Interview questions aligned with survey questions to explore participants' feedback preferences and the reasons for their preferences. Interviews were recorded via telephone and took 20 to 30 minutes. I asked participants to review interview transcripts for accuracy and conducted member checking by asking interviewees to examine excerpts from Chapter 4 to confirm the accuracy of my interpretations. I also ensured that each participant was asked the same questions so qualitative data could be compared (Patton, 2002).

Recruitment Procedures

Online students from the private university were recruited through the participant pool website. Survey participants were asked to provide informed consent at the beginning of the online survey. Students who did not provide consent were asked not to complete the survey. Interview participants were recruited on the final page of the survey. Participants were asked to contact me via e-mail if they wanted to participate in the follow-up interview. This was done to ensure that survey responses remained

anonymous. Participants who volunteered to be interviewed were asked to provide informed consent via e-mail prior to the interview. Some interviews were conducted shortly after survey completion, while others were conducted several weeks after survey completion. Interviews were conducted in March, 2016, during the final month of survey data collection.

Data Analysis Strategies

I used descriptive frequencies when analyzing data from quantitative survey questions addressing preferences for instructor feedback. The Survey Monkey site included software that presented frequencies for each quantitative survey question. When analyzing responses to qualitative survey questions, I copied text from Survey Monkey to a Microsoft Word document, making sure to organize data based on participant identification numbers. I also followed Miles et al.'s (2014) recommendation to use provisional codes when conducting a study that builds on previous research. My study was inspired by Budge's (2011) and Wolsey's (2008) studies addressing students' preferences for electronic feedback, so provisional codes were appropriate. I used the following provisional codes borrowed from Aliakbari and Toni's (2009) study comparing the influence of different types of error-correction techniques on postsecondary EFL students' grammatical accuracy: direct coded (DC), indirect coded (IC), direct uncoded (DU), and indirect uncoded (IU). These provisional codes were related to the quantitative survey questions that elicited data regarding students' preferences for comments and edits in instructor feedback. Direct coded feedback referred to both edits and comments, indirect coded feedback referred to comments but not edits, direct uncoded feedback

referred to edits but not comments, and indirect uncoded feedback referred to neither comments nor edits.

These provisional codes aligned with the social-constructivist theoretical framework, which was used to situate instructor feedback as a scaffolding tool intended to move students through their zones of proximal development (Benko, 2012; McCarthy, 2015). The provisional codes constituted different levels of scaffolding. For example, direct coded feedback constituted high-level scaffolding because the instructor provided both edits and comments when regulating the student's learning. Indirect uncoded feedback constituted low-level scaffolding because the instructor used neither comments nor edits to regulate the student's learning. Instead, the instructor merely highlighted errors and allowed the student to correct them. The other two types of feedback constituted medium-level scaffolding that included either edits or comments but not both.

When viewed through a social-constructivist lens, the purpose of my study was to describe online students' preferences for different levels of scaffolding and to explore their reasons for preferring certain levels but not others. My open-ended survey questions and interview questions were intended to explore students' reasons for preferring certain forms of feedback but not others. I remained attentive to emerging themes that indicated students' reasons for their preferences. A structured yet flexible approach was consistent with Miles et al.'s (2014) recommendation to use both deductive coding based on the conceptual framework and also inductive coding to identify unanticipated themes that emerged from the data. I analyzed survey and interview data for themes that were compared with results from quantitative data. The provisional codes were expected to

align with quantitative findings, which would facilitate comparison of qualitative and quantitative data. If consistencies or discrepancies were found between quantitative and qualitative data, social-constructivist theory would provide a suitable lens for evaluating these similarities or differences.

Threats to Validity

Threats to external validity were minimized by the selection of a large, diverse sample of participants to ensure generalizability of results (Frankfort-Nachmias & Nachmias, 2008). Although the sample was convenient rather than random, the inclusion of a broad range of online students from the private institution reduced threats to external validity. I collected survey and interview data from 93 undergraduate- and graduate-level online students from a private university. Participants reported a broad range of ages and various levels of experience in online course work. The study was conducted online to minimize reactive threats to external validity. The setting for participants, who were online students, was natural rather than contrived (Frankfort-Nachmias & Nachmias, 2008).

Regarding internal validity, selection threat was minimized by the large sample of diverse participants, as described above. Despite the disproportionate representation of graduate-level native English speakers with considerable experience in online course work in the participant sample, selection threat was reduced by the representation of students from several different programs of study and several age groups. Students' self-selection may have posed a threat to internal validity by privileging individuals with high achievement motivation who may have been more inclined to volunteer for the study

(Carless, 2006; Weaver, 2006; Wingate, 2010). I endeavored to minimize this threat by allowing all postsecondary online students who were at least 18 years of age to participate. I also screened for selection threat by including a survey question investigating students' degree of willingness to read instructor feedback, which would reflect their motivation to study feedback and improve their skills. A broad range of responses to this question would indicate a diverse selection of participants based on achievement motivation. History, repeated testing, regression to the mean, experimental mortality, and selection maturation did not pose threats to internal validity because I solicited survey data only once during the study. Maturation posed a modest threat because some time elapsed between survey data collection and interview data collection. However, I endeavored to minimize this threat by conducting interviews as soon as possible after surveys. Instrumentation did not pose a threat to internal validity because the survey instrument did not change during data collection. Experimenter bias was controlled by using survey questions adapted from Budge (2011) and Wolsey (2008) and by avoiding contact with participants during survey data collection. Construct validity was increased by aligning the survey instrument with a social-constructivist theoretical framework (Frankfort-Nachmias & Nachmias, 2008).

Issues of Trustworthiness

I ensured credibility by triangulating data from responses to closed, open-ended, and oral questions. I also conducted transcript reviews and member checks via e-mail with interview participants to ensure my analysis of their responses was consistent with their intent. I invited dissertation committee members to review my coding documents

containing anonymous survey data. I also asked committee members to review my analysis of qualitative data to ensure the credibility of my findings. Transferability was ensured by a thick, rich description of postsecondary online students' preferences based on responses to open-ended survey questions and interview questions. Transferability was also enhanced by the large, diverse sampling of survey participants and by the purposeful, maximum-variation sampling of interviewees based on degree program. Dependability and confirmability were ensured by triangulation of closed, open-ended, and oral responses and by external auditing of the research process, per Creswell's (2013) recommendation.

Ethical Considerations

I obtained Institutional Review Board (IRB) approval from the data collection site before conducting the study to ensure prospective participants would be treated in an ethical manner. The IRB number assigned for the study was 09-10-15-0031628. When collecting survey data, I ensured participants' anonymity by using the Survey Monkey site. Participants were asked to provide their informed consent prior to completing the survey and were not asked to divulge their names or other information that may have revealed their identities. Participants who were willing to be interviewed were asked to contact me via e-mail, which ensured that their survey responses would remain anonymous. Before conducting interviews, I asked participants to provide their informed consent via e-mail after reading the consent form approved by IRB. I preserved interviewees' confidentiality when managing interview data by using pseudonyms and by storing data on a password-protected laptop and also a flash drive that was locked in a

filing cabinet when not in use. Although I had a professional affiliation with data collection site, my relationship did not influence my impartiality as a researcher, as indicated in the survey consent form. The participant sample was not considered a vulnerable population, and the study was not intended to solicit information that may have caused participants to experience discomfort when providing their responses to survey and interview questions.

Summary

In Chapter 3, I described the mixed-methods approach I used when investigating postsecondary online students' preferences for instructor feedback delivered electronically. I intended to promote generalizability of findings by soliciting data from a large, representative sample of postsecondary online students and by triangulating data from closed, open-ended, and oral questions. In Chapter 4, I present the results of my study.

Chapter 4: Results

The purpose of this sequential explanatory mixed-methods study was to describe undergraduate- and graduate-level online students' preferences for instructor feedback delivered electronically via software applications such as Microsoft Word. The purpose also included describing the reasons why students preferred certain types of feedback rather than others. The study was undertaken to answer the following research questions:

1. What types of electronic feedback in word-processing software do postsecondary online students prefer?
2. What reasons do postsecondary online students give for preferring certain types of electronic feedback but not others?

Setting for Study

The survey portion of the study was conducted online via the research participation website of an online university. Students registered for the participant pool and selected from a variety of live studies that had been posted there, including this study. Per IRB regulations, I was not permitted to solicit student participation directly. Instead, I was required to allow students to enter the participant pool website with no prompting and choose to complete my survey. During the data collection period, I was given retroactive permission by IRB to have a colleague post an announcement of my study in the faculty newsletter. This was done to enhance awareness of my study among the student population and was not deemed coercive. Survey participation was strictly voluntary. Because participants completed the survey online from various locations, there

was no physical setting for the study. Interviews, which were also voluntary, were conducted via telephone after surveys were completed.

Demographics

According to data collected via the Survey Monkey website designed for the study, 93 participants completed the survey. In this sample, 86 participants (95.6%) identified themselves as graduate students, and four (4.4%) identified as undergraduates. When asked whether English was their first language, 81 participants (89.0%) answered yes and 10 (11.0%) answered no. When asked to identify their area of study, three participants (3.3%) selected business, one (1.1%) chose information technology, 22 (24.2%) chose health sciences, 33 (36.3%) selected social sciences, two (2.2%) chose humanities, and 30 (33.0%) selected other. In this final category, 23 participants identified education as their area of study. When participants were asked how many online courses they had taken, 77 (84.6%) answered four or more, 10 (11.0%) answered between two and four courses, and four (4.4%) answered one course. When asked to identify their current age, participants reported a wide range, as shown in Table 1. Most students (68) were between the ages of 30 and 54.

Table 1

Age of Survey Participants in Years

Range	Number	Percent
18-20	0	0
21-24	0	0
25-29	6	6.7
30-34	15	16.7
35-39	9	10.0
40-44	13	14.4
45-49	21	23.3
50-54	10	11.1
55-59	8	8.9
60-64	6	6.7
65+	2	2.2

Data Collection

I collected survey data from 93 participants. All participants answered each of the 12 quantitative survey questions except for Questions 5 and 12, which received 92 responses each. Question 13, the first qualitative question, received 84 responses. Question 14, the second qualitative question, received 80 responses. Of the five demographic questions, 91 of the 93 participants answered the questions addressing online experience, English-language status, and area of study; 90 participants answered the questions addressing grade level and age.

I collected survey data via the research participation system of an online university. I uploaded the Survey Monkey instrument to the participant pool website in October, 2015. Survey data collection occurred over a 5-month period from October 21, 2015, to March 30, 2016. Data were recorded via the Survey Monkey website, which provided convenient views of question summaries and individual responses. Question

summaries included the number of responses and skips for each question as well as a bar graph showing percentages for each response to each quantitative question. Data for the two qualitative questions were presented in text form as they had been originally typed by survey respondents. When transferring qualitative data to a Word document, I tagged each response according to the date and time its respective survey was completed. I also assigned a number to each response for identification purposes when reporting data. For example, responses from the first survey posted were labeled Survey Participant 1 (SP1). I was able to report descriptive frequencies for responses to quantitative survey questions and analyze data from the qualitative survey questions for emerging themes.

In addition to survey data, I collected interview data from four participants. Interviews were scheduled near the end of survey data collection, which meant some interviewees experienced a delay of a week or two between survey and interview participation while others experienced a month or more. Volunteers who were interested in being interviewed had been asked to send me an e-mail after completing the survey. I initially received 19 requests for interviews from the 93 who completed the survey. When preparing to conduct interviews in March, 2016, I sent each volunteer an e-mail asking him or her to identify his or her degree program. Because the surveys were anonymous, I did not have access to their responses to the five demographic survey questions. I received 13 responses confirming an interest in being interviewed. Five participants reported education as their area of study, three indicated nursing, two reported public policy, two indicated public health, and one reported psychology. To ensure maximum variation sampling, I chose students from different programs (psychology, education,

nursing, and public policy). I attempted to schedule an interview with the only undergraduate volunteer, who was a public health student, but did not receive a reply in time.

I sent each of the four interview participants the consent form prior to the interview. Each participant responded via e-mail to provide consent. I conducted three telephone interviews the first day and the final interview the next day. I transcribed the recorded interviews within 2 days and sent participants their respective transcripts to review. All four participants indicated the transcripts were accurate. I also sent interview participants the relevant portion of Chapter 4 so they could confirm that my interpretation of their responses was consistent with their intent; all four participants confirmed the accuracy of my analysis. When preparing to code interview data, I used pseudonyms. For example, the first participant was Interview Participant 1 (IP1), the second was IP2, and so on. Beyond my inability to collect the targeted number of survey responses, to gather data from a second online university, and to conduct interviews within a short time after survey participation for all participants, there were no unusual circumstances encountered during data collection. In the following sections, I present the results two ways. First, I present the findings from the quantitative survey data, qualitative survey data, and interview data respectively. Then I frame the results as responses to the first two research questions. I conclude this chapter with a summary of the findings.

Quantitative Data Analysis

In this section, I present the findings from quantitative questions in the order in which they appeared in the survey. When analyzing the quantitative data, I examined

percentages for responses to each quantitative question. I looked for tendencies to determine whether there was a wide range of responses or general consensus among the participants. Following the data compiled in the Survey Monkey website, I identified descriptive frequencies for each survey question and presented them in tables. Survey response options are listed in the order they appeared in the original survey. The highest percentages do not necessarily appear at the top of tables.

Quantitative Survey Results

In response to Survey Question 1 ("I prefer to have online instructors correct my errors using track changes"), most participants reported that they strongly agreed (63.4%) or slightly agreed (20.4%), as presented in Table 2.

Table 2

Preferences for Track Changes

Response	Number	Percent
Strongly agree	59	63.4
Slightly agree	19	20.4
Neutral	12	12.9
Slightly disagree	2	2.2
Strongly disagree	1	1.1

In response to Survey Question 2 ("I prefer to have online instructors include comments to explain their corrections"), most participants strongly agreed (95.7%), as presented in Table 3.

Table 3

Preferences for Inclusion of Instructor Comments

Response	Number	Percent
Strongly agree	89	95.7
Slightly agree	4	4.3
Neutral	0	0
Slightly disagree	0	0
Strongly disagree	0	0

In response to the options offered to complete Survey Question 3 ("I prefer to have online instructors' comments appear…."), most participants selected "in balloons in the margins of my paper" (77.4%) while less than a quarter chose "within my essay text" (20.4%). Results are presented in Table 4.

Table 4

Preferences for Location of Instructor Comments

Response	Number	Percent
Within essay text	19	20.4
In balloons	72	77.4
Neither	2	2.2

In response to Survey Question 4 ("I prefer to have online instructors use grammar codes when identifying errors in my assignments"), responses were mixed. Most participants were neutral (34.4%) or strongly disagreed (19.4%), as presented in Table 5.

Table 5

Preferences for Grammar Codes

Response	Number	Percent
Strongly agree	16	17.2
Slightly agree	14	15.1
Neutral	32	34.4
Slightly disagree	13	14.0
Strongly disagree	18	19.4

In choosing options to Survey Question 5 ("I prefer to have online instructors include the following when grading my assignments"), most participants preferred both comments and corrections (92.4%). I included an option for "highlighted errors but no corrections or comments" in the survey, but none of the participants selected this. The two participants who selected "other" reported that comments should be connected to the rubric. Results are presented in Table 6.

Table 6

Preferences for Inclusion of Corrections and Comments

Response	Number	Percent
Corrections only	0	0
Comments only	5	5.4
Both	85	92.4
Neither	0	0
Highlights only	0	0
Other	2	2.2

In choosing responses to Survey Question 6 ("I prefer to have an online instructor…."), most participants selected "insert comments throughout my paper"

(58.1%) and over a third preferred both throughout and at the end of the paper (37.6%). Results are presented in Table 7.

Table 7

Preferences for Instructor Comments Within Paper and/or at End

Response	Number	Percent
Comments throughout	54	58.1
Comments at the end	3	3.2
Neither	1	1.1
Both	35	37.6

In response to Survey Question 7 ("I always review my online assignments for electronic feedback from my online instructor"), most participants reported that they strongly agreed (91.4%), as presented in Table 8.

Table 8

Students' Willingness to Review Online Instructor Feedback

Response	Number	Percent
Strongly agree	85	91.4
Slightly agree	6	6.5
Neutral	1	1.1
Slightly disagree	1	1.1
Strongly disagree	0	0

In response to Survey Question 8 ("I have found that the electronic feedback provided by online instructors has been helpful in developing my writing skills"), most participants reported that they strongly agreed (67.7%) or slightly agreed (15.1%), as presented in Table 9.

Table 9

Students Considered Feedback Helpful to Their Skill Development

Response	Number	Percent
Strongly agree	63	67.7
Slightly agree	14	15.1
Neutral	9	9.7
Slightly disagree	4	4.3
Strongly disagree	3	3.2

In response to Survey Question 9 ("Considering the types of instructor comments listed below, which ones do you prefer?"), results were mixed. Participants were allowed to choose more than one response. The most popular choices were explorations (85.0%), corrections to content (81.7%), and complex affirmations (73.1%). The least popular choices were personal reflections (24.7%), simple affirmations (32.3%), and observations (43%). Results are presented in Table 10.

Table 10

Preferences for Types of Instructor Comments

Response	Number	Percent
Simple affirmations	30	32.3
Complex affirmations	68	73.1
Explorations	79	85.0
Personal Reflections	23	24.7
Clarifications	58	62.4
Observations	40	43.0
Questions	59	63.4
Corrections to content	76	81.7
Corrections to mechanics	57	61.3

In response to Survey Question 10 (“I prefer online instructors to include completed grading rubrics with their electronic feedback”), most participants answered yes (82.8%). Results are presented in Table 11.

Table 11

Preferences for Grading Rubrics

Response	Number	Percent
Yes	77	82.8
No	16	17.2

In response to Survey Question 11 (“In my online courses, the instructor’s electronic feedback is consistent with the grading rubric”), most participants strongly agreed (51.6%) or slightly agreed (24.7%). Results are presented in Table 12.

Table 12

Students Considered Feedback Consistent With Grading Rubrics

Response	Number	Percent
Strongly agree	48	51.6
Slightly agree	23	24.7
Neutral	11	11.8
Slightly disagree	10	10.8
Strongly disagree	1	1.1

In response to Survey Question 12 (“I consider my English writing skills to be very good”), most participants strongly agreed (64.1%) or slightly agreed (25.0), as presented in Table 13.

Table 13

Students Considered Their English Writing Skills Very Good

Response	Number	Percent
Strongly agree	59	64.1
Slightly agree	23	25.0
Neutral	8	8.7
Slightly disagree	2	2.2
Strongly disagree	0	0

Qualitative Survey Data Analysis

I used a structured yet flexible approach when analyzing qualitative survey data. I followed Miles et al.'s (2014) recommendation to use both deductive coding based on the conceptual framework and also inductive coding to identify emerging themes. After 65 surveys had been completed, I began analyzing qualitative data using the provisional codes described in Chapter 3 (direct coded, indirect coded, direct uncoded, and indirect uncoded). However, it quickly became apparent that additional codes would be needed. I selected codes based on key words or phrases from the qualitative survey responses, including *balloon*, *supportive*, *examples*, *detailed*, *rubric*, *timely*, and *electronic*. After transferring all qualitative data to a repository Word document, I examined each participant's response to Question 13, the first of the two qualitative questions, starting with the most recently completed survey. I copied the text into the corresponding code category in a separate Word document. Participant responses sometimes contained multiple comments that needed to be coded differently. If multiple comments could not be easily coded in separate categories, I copied duplicate comments into different

categories and included a marginal note to identify the location of the duplicate comment. This was rare. I ensured all substantive comments were coded to prevent outlier data from being overlooked. I did not code very short comments that did not indicate clear preferences; those comments were also rare. Finally, I included the original date/time stamp next to each coded comment and assigned a number to each response for identification purposes (e.g., SP1, SP2). These numbers were identical to the numbers originally assigned in the Survey Monkey database.

When copying responses to Question 14 (the second qualitative survey question) to the repository Word document, I changed the font color to designate Q14 data. When transferring Q14 data to the coding document, I placed relevant comments in the same code categories generated for Q13, and I created new categories as needed. I also color-coded these new categories to match the Q14 data. I coded new qualitative data periodically as it came in, copying comments to the repository document and transferring to the coding document after analysis. I created one master coding file and copied Survey Questions 13 and 14 at the top (color coded to match the corresponding comments). When 68 surveys had been completed and comments transferred to the coding document, I began analyzing the comments in each code to ensure data were appropriately categorized. I moved comments as needed and created new codes based on closer examination of key words and phrases in the data.

After 68 surveys had been collected, I examined comments I had originally placed in the provisional code categories and realized these were sparsely populated and did not represent the data as effectively as the new codes that had emerged during the initial

coding of qualitative responses. I moved comments from three provisional categories to emerging categories, and I changed the name of the fourth provisional category from "direct uncoded" to "track changes" because this designation more closely reflected the data in that group. After deleting the other three provisional codes, I reexamined each comment to ensure proper placement. I moved and consolidated comments and created new codes as needed based on key words and phrases in the data. In anticipation of constructing a coherent thematic narrative of the qualitative results, I also rearranged code categories so related ones appeared near each other. For example, I placed the balloon code near the proximal code. I continued adding qualitative data to the repository and coding documents as additional surveys were submitted. Once data collection was complete and the final selection of codes was determined, I identified major and minor themes based on the number of responses in each code category. Themes and outliers are presented in the next section.

Qualitative Survey Results

This section presents qualitative survey findings organized by major themes, minor themes, and outliers. Major themes contained 20 or more participant comments, and minor themes contained at least 2 but not more than 19 participant comments. Themes are arranged hierarchically based on the number of responses for each theme, with the most popular themes appearing first. I include several representative examples to illustrate each theme and provide tables as needed to summarize the qualitative findings. I also present discrepant comments, which were rare.

Major Theme 1: Desire to Improve Skills

The dominant theme from the qualitative data was the desire to improve as an academic writer. Participants expressed an interest in using instructor feedback to develop their writing skills. Data showed that 61 responses included a comment reflecting a desire to improve:

- "Feedback is how students learn and grow in their writing and understanding of information. I cannot become a better writer and learn if I do not receive feedback that helps me do both of these things." (SP73)
- "I like to know what I am doing wrong with recommendations to improve." (SP42)
- "I prefer criticism as this enables me to improve." (SP21)
- "I prefer the types of feedback that are meaningful to my transformational journey. If the feedback does not contribute to supporting my scholar practitioner learning process, then I do not see the point of this type of feedback." (SP57)
- "Some instructors provide feedback that does nothing to assist me in improving my skills. I don't like fluff." (SP16)
- "I prefer to receive clarification on areas of improvement." (SP30)
- "I like to know what I did well as well as what I need to work on." (SP67)
- "I appreciate feedback that is meaningful. For example, if I make a mistake or do something wrong, I need to know about it so that I can improve." (SP42)

Major Theme 2: Proximal Comments

Several participant responses (53) indicated that instructor comments should be located near related essay text. Approximately one fourth (14) of these responses indicated that proximity was important but did not specify the desired location of proximal comments (e.g., in marginal balloons, in the paragraph text). Representative comments from this nonspecific proximal category appear below:

- "I prefer to receive electronic feedback from my online instructor within the body of my essay." (SP65)
- "With comments not associated with a specific part of my paper, I am not sure what the instructor is talking about. It helps to have the comment be located in the location being referenced." (SP64)
- "It is important for me to have feedback posted throughout the paper rather than a long comment at the end. This makes the comments and corrections more concise and clear and easier to follow." (SP35)
- "I prefer feedback to be related to content and analysis so I can assess my abilities. I also prefer comments in the area of the paper where there is an issue in need of improvement." (SP14)
- "I think that by providing feedback where the feedback needs to be addressed makes it easier to see the error." (SP63)
- "I prefer the feedback directly adjacent to the error or the section being referred to in order to avoid confusion." (SP51)

Nearly half (26) of the responses in Theme 2 indicated a clear preference for marginal balloon comments. Representative comments appear below:

- "I prefer comments ballooned at the specific area that needs to be corrected." (SP63)
- "I prefer to receive instructor feedback in the form of notes placed in the margin of my submitted work." (SP55)
- "I prefer to have feedback embedded in my assignments with comments in bubbles." (SP19)
- "Well, if the instructor comments in the paper instead of the margins, the results will be confusing or messing. Basically, I prefer the instructor does not comment over text because I need to see both (my text and their comments) clearly." (SP43)
- "I prefer bubbles because it visually separates the instructor's ideas from my ideas and then I can combine the two together." (SP8)

Only one of the 93 participants indicated a preference for in-paragraph comments rather than balloons:

- "Word bubbles are just overwhelming to me. I am in my early 30s. I am not old and unable to understand technology, I just prefer things the way I've always had them. In text and not on the side, even though I am sure many would consider that a more clean way of leaving comments." (SP78)

Ten responses in this proximal theme indicated a preference for both in-text comments and a long comment at the end:

- “I prefer comments all along the assignments and an overall, conclusive feedback at the end.” (SP57)
- “I prefer that my instructors use a combination of both comments throughout my assignment as well as a more thorough elaboration of their comments at the end of the assignment.” (SP49)
- “Comments throughout the paper are helpful, and can be strengthened by a synthesizing (albeit brief) paragraph at the end of the assignment.” (SP46)
- “I really appreciate feedback specific to my writing. For corrections, I prefer shorter statements and marks throughout the paper. For overall assessment, I prefer a longer comment at the bottom (even if it is only a sentence or two reflecting on the whole assignment).” (SP12)

Two discrepant responses indicated preference for comments only at the end:

- “I prefer to receive comments about my content and errors at the end of my papers with explanations of how I could improve.” (SP45)
- “Comments at end of assignment.” (SP27)

A summary of the findings for the proximal feedback theme is presented in Table 14.

Table 14

Preference for Proximal Comments

Response	Number
Comments near essay text	14
Balloon comments	26
In-text and end comments	10
End comments only	2
In-paragraph comments	1

Major Theme 3: Clear, Detailed Feedback

In addition to the dominant themes of using feedback to improve skills and preferring proximal feedback, many participant responses (37) indicated a preference for instructor feedback that is easily comprehended and substantive:

- "I dislike simple feedback that does not provide a substantive critique of my work. A good job or it needs work does nothing to improve my comprehension or writing skills." (SP93)
- "I would like that my online instructor's feedback was substantial, productive, encouraging, clear, concise, and precise." (SP54)
- "I prefer to get straight, honest feedback that is specific to my writing instead of a generic statement which I have received before." (SP44)
- "Anyone can say something, like 'Good Job.' That does not mean my paper was actually read or even good. I want specific reasons why it was good or bad." (SP76)

- "It is essential to have detailed feedback when working at the doctoral level. This feedback should include specific detail to errors, content that needs additions and/or omissions, and simply learning from the instructor's expertise (through meticulous feedback)." (SP18)
- "Overall, I always hope that they will be as specific in their feedback as the changes they expect to see. It is most frustrating when a professor has vague feedback on harsh grading or seems to be bothered/threatened if asked for clarification." (SP12)
- "I prefer substance to general platitudes and I need the details to determine how to improve." (SP37)
- "Some professors delight in the ability to write abrupt comments that do not provide any insight - do not need to write a book - just demonstrate what is wrong - again, provide insight and direction." (SP20)

Major Theme 4: Constructive, Supportive Feedback

The fourth major theme was that instructor feedback should be delivered with a supportive tone. Representative examples of the 28 responses in this theme appear below:

- "Eliminate value loaded bias comments, give me direction not insult - let me use my own mind - nudge me the right way so I learn." (SP20)
- "I believe various instructors take liberties to insult and complain. I do not want to be the recipient of someone's bad day." (SP31)
- "It is important for me to know that my instructors care about my learning and growing rather than how many errors they can find." (SP58)

- "One instructor that I found most effective would raise questions throughout my paper. Some of his questions were genuine questions where he would tell me that I didn't need to address them, but simply think about them. I know this kind of grading takes time but it has been most useful to me. It helps me to think like a scholar." (SP4)

Minor Theme 1: Electronic Feedback

Several responses (18) indicated support for electronic feedback delivered as attachments or links within courses or via e-mail. Participants described the convenience and efficiency of electronic feedback:

- "In an attachment as a Word document or the rubric with explanation of grading for discussion posts." (SP34)
- "Electronic is convenient and efficient." (SP61)
- "Electronic feedback is quick and to the point." (SP33)
- "I prefer corrections, insights, and suggestions for my electronic feedback from instructors and I am not interested in other types because of time constraints." (SP32)
- "I do not mind other means of feedback but electronic feedback is faster. If I had to wait to speak to an instructor about giving me feedback in the online environment it would probably be difficult to schedule." (SP5)

Minor Theme 2: Rubric Feedback

Eleven responses indicated a preference for rubrics to clarify how the grade was determined:

- "I prefer to see the rubric used and a summary comment(s) explaining the overall score. Sometimes, when making a specific point on a specific piece of the rubric, it's nice to have that comment in the actual rubric square where the point value is contained." (SP10)
- "I prefer to receive electronic feedback from my online instructors on the rubric and in comment balloons throughout my writing assignments." (SP32)
- "I like feedback in any form really but efficiency and being able to tell how I did related to the rubric are so helpful." (SP2)
- "While having rubrics attached, I do not find it necessary to understand where I have lost marks." (SP19)

Minor Theme 3: Track Changes

Seven responses indicated a preference for track changes delivered via Microsoft Word to promote error correction and skill development:

- "Track changes has been my preferred method so far. It tells me exactly where the problems or strong points of my paper are." (SP64)
- "It is helpful for instructors to use the grading track changes system throughout the document. Simply providing a student with a rubric is not enough to develop a student's learning abilities." (SP30)
- "When track changes are used, I can visually see where I need to make corrections and improve my writing skills." (SP40)

- "To me, electronic feedback in word (tracked changes) are easiest since it's the writing system we use. Keeping consistent with software streamlines all processes rather than providing feedback in different areas." (SP12)

Minor Theme 4: Timely Feedback

Seven responses indicated that feedback delivered in a timely manner (i.e., well before the next assignment due date) was preferred:

- "Timely feedback i.e. within a week is highly desirable and helpful, especially when an assignment builds upon the assignment from the previous module." (SP46)
- "Feedback should be as instructive and as prompt as possible." (SP9)
- "I really enjoy the comments from the instructor that help improve writing skills. I also think it is most important to have papers graded before the next assignment. This allows the student to correct the writing content." (SP1)
- "I like to receive feedback in a timely manner, with constructive criticism, and information that will help me with future papers." (SP69)

Minor Theme 5: Feedback Should Justify Point Deductions

Five responses indicated that instructor feedback should include information explaining why points were deducted:

- "I prefer instructors to indicate why/how I might have lost points." (SP29)
- "I want instructors to tell me if the comments are rules in which points can be deducted, or suggestions for improvement, no points deducted." (SP27)

- "Currently, I respect and like the way my professor provides feedback. The feedback has explanation of the reason why I received the grade. However, I would like to know if I lose my five points why specifically that amount of points." (SP33)

Minor Theme 6: Examples

Four responses indicated that instructors should include examples with their feedback:

- "I would love to see examples of where I need improvement within a word document, such as the track changes option." (SP68)
- "Specific examples to be given of what is expected in the assignment." (SP28)
- "Examples of how to improve or examples of why the area of the paper does not meet full requirements." (SP30)

Minor Theme 7: Feedback Needed Despite Good Grade

Three responses indicated that substantive feedback is needed even though a good grade was assigned:

- "I need feedback even if I do well because it allows me to gauge my progress and make improvements where needed." (SP41)
- "I am a good writer and most frequently have received 100 on papers. However, I am of the opinion that there is always room for improvement. Even if a paper completely fulfills current requirements, there is still the ability to improve to a higher level, particularly in terms of content." (SP15)

- "I prefer any kind of comments over nothing. Even if I earn top points, I know I can improve on my answers or writing." (SP60)

Minor Theme 8: No Instructor Personal Reflections

Three responses indicated that instructors should avoid including personal reflections with their feedback:

- "I also don't like long narratives about their personal experiences. Interesting as it may be, my time is very limited and I'd rather just hear about the information that is directly related to the quality of my paper." (SP64)
- "I prefer the usual feedback about the content of my work. Personal reflections from the instructors is not needed unless it is contributing to my understanding of the work." (SP11)

Minor Theme 9: No Grammar Codes

Two responses indicated that instructors should not use grammar codes when providing feedback on writing assignments:

- "I don't like grammar codes because I'm not familiar with them & I may not understand what the problem is." (SP64)
- "I do not like the abbreviations for words. I simply am not abreast of this type of terminology." (SP1)

Outliers

Participant comments that could not be categorized according to major and minor themes were rare. One participant reported an interest in both quantitative and qualitative feedback to promote skill development:

> I like to receive quantitative and qualitative feedback from my instructors. I prefer to see comments on what I am doing well and why as well as what I can improve upon and how I can specifically improve upon it…It is easy to just provide a score for a paper; however, real 'teaching' requires an instructor to demonstrate that he or she has read, understood, and critically engaged with the student's writing. (SP39)

A second participant reported having received very limited feedback. A third participant reported that instructors should not repeat the same corrective comments throughout the paper. A fourth participant reported a strong dislike for long, narrative comments at the end of a paper, which were considered "visually discouraging." A fifth participant indicated that instructors should use the same types of comments but did not specify which types were preferable. A sixth participant reported that having a disability made it difficult to process instructor feedback delivered electronically. Overall, I was able to categorize qualitative survey data according to the major and minor themes. The minimal presence of outlier data reinforced the integrity of theme identification. Qualitative data from the 84 responses to Survey Question 13 and the 80 responses to Survey Question 14 were categorized using the same codes. Some comments were coded in multiple categories, but this was rare. The number of responses in Table 15 refers to the total number of comments counted in that theme.

Table 15

Themes From Qualitative Survey Data

Theme	Number of responses
Desire to improve skills	61
Proximal feedback	53
Clear, detailed feedback	37
Constructive, supportive feedback	28
Electronic feedback	18
Rubrics included	11
Track changes used	7
Timely feedback	7
Feedback to justify deductions	5
Examples included	4
Feedback needed despite good grade	3
No instructor personal reflections	3
No grammar codes	2

Interview Data Analysis

I analyzed transcripts from the four interviews using the emerging survey data codes as provisional codes, which was consistent with my sequential explanatory mixed-methods design (Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009). During my initial analysis of the qualitative survey data, I ended up discarding the provisional codes I had preselected from the literature (Aliakbari & Toni, 2009). However, most of the emerging provisional codes from the qualitative survey data analysis were useful in my analysis of the interview data. I used the same approach when coding interview data as I did when analyzing qualitative survey data. I copied all of the interview responses into a single Word file and began analyzing responses one by one. Some responses contained data that needed to be coded differently from the provisional codes. After copying

comment text into the code file, I highlighted the comment text in the source file to indicate that the datum had been coded to ensure double-coding would not occur. When I determined that a comment required coding in different categories, I made a marginal note of the overlapping comment in the master coding file to indicate that accidental double coding had not occurred. Most of the interview data aligned with codes from the qualitative survey data. However, some comments required new codes, which I created during analysis using key words from the comments, such as *resources* and *evidence*. Once all of the interview data were coded, I analyzed each comment to ensure proper placement. I moved items to different categories as needed based on a comparison with other comments in that category to ensure consistency and alignment. Each interview participant was a graduate student, and the average interview time was 20 minutes. Results are presented in the next section.

Interview Results

Coding of interview data indicated that all four major themes from the qualitative survey data analysis were supported: desire to improve skills, preference for proximal comments, preference for clear/detailed feedback, and preference for constructive/supportive feedback. Many interview responses also supported four of the minor themes from the qualitative survey data: rubric feedback, timely feedback, feedback needed to justify deductions, and feedback needed despite good grade. In addition, two new themes emerged: include references to external resources, and provide evidence that the instructor looked at the paper. A few outlier comments yielded further

insight into students' preferences and the reasons for their preferences. Results are presented in the sections below.

Support for Major Theme of Desire to Improve Skills

Seven interview comments indicated that instructor feedback is needed to improve the student's performance on the next draft or the next assignment. Three of the four interview participants made comments to support this theme. Representative comments appear below:

- "If you point that out to the person and give a clue for better direction, that might be more helpful than 'Well, here it is.'" (IP1)
- "I like the explorations because it helps me to understand where I am. If I know how I can improve, I'm willing to do that. I take constructive criticism well because otherwise you're not going to learn." (IP3)
- "All of the electronic feedback has helped me to take a step back and look at how I was presenting my case instead of just putting something down. It made me be very thoughtful. I always want to make sure whatever I'm writing is clear." (IP3)

Support for Major Theme of Proximal Feedback

Ten interview comments aligned with the theme of proximal feedback. Four of these comments specifically identified marginal balloons as the preferred form of proximal feedback. All four interview participants mentioned that instructor comments should appear near relevant essay text:

- “I like when they use the bubbles, the correction on the side where you can see exactly what they were thinking rather than waiting until the rubric, and you’re missing points and you’re not sure why.” (IP1)
- “My preference is with a Word document with changes that are tracked in balloon version on the right margin of the paper.” (IP2)
- “I like comments in both the paragraph and balloons because some assignments lend themselves to the balloon comments and some lend themselves to within the text itself.” (IP3)
- “I think track changes is the most visually effective when it’s a paper or longer document. That way I can see which sections they’re speaking of when they say ‘Work on your grammar or APA style or wording things differently.’” (IP4)

Support for Major Theme of Clear, Detailed Feedback

A total of six interview comments coming from all four interview participants supported the preference for clear, detailed feedback:

- “What doesn’t help is no comments. A quiet, silent professor without any input, that’s not helpful.” (IP2)
- “If somebody says, ‘Great job’ but they don’t expound upon how I did great, then I don’t know how to improve.” (IP3)
- “Little nitpicky ones, ‘Oh you missed a comma,’ are not so helpful. I like feedback that makes sure there’s alignment all the way through, that there’s an order to it not only to you but to other people who would read the paper. The

reason I keep coming back to the comma one is because it was the only comment on the paper." (IP1)

- "I don't find any value in a comments that say "Great job." I want something with some substance." (IP4)

Support for Major Theme of Constructive, Supportive Feedback

Seven comments reported by two interview participants aligned with the constructive, supportive theme identified in the qualitative survey data analysis:

- "As long as comments are provided in a positive way, I have no issues with them. I had one where even the positive comments seemed backhanded. Those weren't as productive." (IP1)
- "The positive comments keep you going. The negative ones can derail you a little bit if you let them. I understand that not every work is a piece of art, but there has to be something in there that's salvageable." (IP1)

Support for Minor Theme of Rubric Feedback

Six interview comments provided support for the rubric theme identified in qualitative survey data analysis. All four interview participants made comments to support this theme:

- "I'd like them to put the rubric at the end and show me where my work fits in within the demands of the rubric." (IP2)
- "If you're not clear on the questions to be addressed, sometimes if you pull the rubric you can put a direction on your paper or to clarify the assignment." (IP1)

- "I do like grading rubrics because as a nursing instructor myself that gives some stability that you're being fair to everyone. As a student I have something to gauge myself by so that I know what I have to live up to. For example, last quarter Dr. R. critiqued me on a paper with a rubric. He explained very well exactly what was wrong, and that made a big difference." (IP3)
- "It's [rubric] a good method based on the diverse nature of the population of students. While there is some qualitative wiggle room within each section, you know how the instructor is basing their expectations." (IP4)

Support for Minor Theme of Timely Feedback

Two comments from one participant provided additional support for the theme of timely feedback:

- "It was a timing problem because the instructor didn't get back to me until several days into the following week. I kind of felt ignored right from the start, but that's the only time it happened." (IP4)
- "I tend to be type A and want things done as quickly as I can, so I've had to learn some patience on feedback. But overall it's been a very positive experience." (IP4)

Support for Minor Theme That Feedback Should Justify Deductions

Two interview comments provided support for the theme that instructor feedback is needed to justify point deductions:

- "I really like it when they put a rubric at the end and show me how many points I could have earned had I delivered a perfect product." (IP2)

- "Maybe the grade isn't what you were expecting but at least I know why I got it." (IP2)

Support for Minor Theme That Feedback Is Needed Despite Good Grade

Three interview comments provided support for the theme that instructor feedback is needed even though a good grade was given:

- "The worst thing to happen is to get 100 out of 100 with a 'good job' attached. That tells me nothing." (IP2)
- "But if you're going to give me a perfect grade with 'great job' when I probably didn't expect it or deserve it, that doesn't give me the feedback that I'm wanting." (IP4)

Emerging Interview Theme 1: Include Resources to Promote Learning

Six interview comments indicated that instructor feedback that includes references to external resources is helpful in promoting learning. Three of the four interview participants made comments to support this theme:

- "What has helped is when they refer me in their comments to other research or back to the literature of the course." (IP2)
- "Last quarter I had Dr. R. He was amazing. Not only did he say 'This is where you fell short,' but he was able to tell me where to go to find what you need. 'This is where to look for it.' He was able to give me specific resources, and that made such a difference because it was a research course." (IP3)
- "What I found most helpful were very specific references. A couple of professors were very good with specific reference citations especially when it has to do with

APA. I found it helpful when they were calling me on something to say 'Hey next time read p. blah blah blah.'" (IP4)

Emerging Interview Theme 2: Provide Evidence That the Paper Was Read

Five interview comments indicated that instructor feedback is needed to show that the instructor read the paper. Two of the four interview participants made comments to support this theme:

- "It's helpful when you see the comments that they actually looked at the paper." (IP1)
- "It's great to see that someone gets what you wrote and took the time to read it." (IP2)

Outlier Comments

All four interview participants reported that audio or video feedback had not been offered in any of the online courses they had taken. IP1 reported that this type of feedback would probably not be helpful, but IP4 indicated that audio feedback would be better than "Great job." The other two interview participants did not report a likely preference for—or lack of preference for—audio or video feedback. IP2 and IP3 mentioned that telephone feedback had been helpful but was rare. IP2 reported that the quality of feedback given in course work affected decisions regarding committee selection: "I chose my chair and committee based on how they reviewed work in the classroom." IP2 also reported that in-text comments should focus on content rather than mechanics: "If there are writing or grammar errors, I'd like them [instructors] to note that at the beginning of the paper. I want them to review my work for content, not for writing

or grammar." As with qualitative survey data analysis, interview data analysis yielded few discrepant comments. Most of the interview data aligned with existing themes from the survey data or emerging themes from the interview data.

How Data Addressed Research Questions

In the next sections, I present the findings according to how they were used to answer the research questions. Results were sufficient to answer both questions.

Research Question 1

Findings from the quantitative survey data and themes from the qualitative survey data and interview data were used to answer RQ1: What types of electronic feedback in word-processing software do postsecondary online students prefer? Participants reported that they preferred proximal, detailed, supportive, timely feedback that included rubrics and track changes. Regarding proximal feedback, most participants preferred marginal balloon comments rather than comments typed directly in the paragraph text. Participants also reported a preference for examples and external resources to be included with instructor corrections and comments. Participants did not prefer grammar codes, instructors' personal reflections, or simple affirmations that were not coupled with more detailed feedback.

Research Question 2

Several themes from the qualitative survey data and interview data were used to answer RQ2: What reasons do postsecondary online students give for preferring certain types of electronic feedback but not others? Participants reported that feedback was needed to promote skill development, to justify deductions, and to provide evidence that

the paper had been read. When earning a good grade, participants wanted detailed feedback rather than simple affirmations because feedback was required for skill development and to show that the instructor had read the paper. In addition, participants reported that marginal balloon comments were preferable to in-line comments or comments at the end of the paper because balloon comments were near the essay text but clearly distinguishable from it, which made the comments easier to understand. Detailed, proximal feedback was also preferable to rubric feedback alone because proximal comments were needed to justify deductions reported in rubrics.

Evidence of Trustworthiness

I increased the credibility of findings by triangulating data from three sources: closed survey questions, open-ended survey questions, and oral interview questions. I asked interview participants to review their transcripts to ensure accuracy. I also conducted member checks by asking interview participants to review my interpretation of their responses to ensure consistency with their intent. I sent relevant portions of Chapter 4 to each interview participant and received responses confirming the accuracy of my interpretation. When coding qualitative survey data and interview data, I invited dissertation committee members to review my coding analysis to ensure credibility of theme identification. Transferability was ensured by a thick, rich description of postsecondary online students' preferences based on responses to closed survey questions, open-ended survey questions, and oral interview questions. Transferability was also enhanced by the diverse sampling of survey participants and by the purposeful, maximum-variation sampling of interviewees based on degree program. Dependability

and confirmability were ensured by triangulation of closed, open-ended, and oral responses and by external auditing of the research process, per Creswell's (2013) recommendation.

Summary

Quantitative survey findings indicated a strong preference for track changes, for comments to be included with edits, for comments to appear in marginal balloons rather than within paragraph text, and for comments and corrections to be included in essay feedback. In addition, most participants wanted instructor comments to appear throughout the paper, and some wanted comments within the paper and also at the end. Most participants preferred the use of grading rubrics and agreed that instructor feedback was consistent with grading rubrics. Most participants did not prefer grammar codes. Most participants preferred detailed comments in the form of explorations, corrections to content, complex affirmations, questions, and clarifications as opposed to simpler comments in the form of observations, simple affirmations, and personal reflections. Most participants reported that they review their online assignments for instructor feedback and that feedback has been helpful in developing their writing skills. Finally, most participants agreed that their English writing skills were very good.

Qualitative survey data aligned with quantitative survey data. Qualitative responses indicated that participants preferred feedback that was proximal, detailed, supportive, timely, and electronic. Participants supported the use of rubrics, track changes, and examples but did not want instructors to use grammar codes or personal reflections. Participants indicated that feedback is needed even when the grade is good

and is needed to justify deductions. Qualitative interview data reinforced participants' preferences for proximal, detailed, supportive, timely feedback and for the use of rubrics. Interview participants reiterated that feedback is needed despite a good grade and to justify deductions. Interview participants preferred detailed, customized feedback to provide evidence that the instructor had read the paper. In addition, interview participants reported that feedback is needed to promote skill development and to improve writing performance on upcoming assignments. Interview participants also reported that instructor feedback should include resources students can access on their own to promote their skill development.

In Chapter 5, I interpret the results of the study in the context of previous research. I also examine limitations of the study and provide recommendations for further research. In addition, I describe the implications for social change regarding best practices for postsecondary writing instruction in the online environment.

Chapter 5: Discussion, Conclusions, and Recommendations

This sequential explanatory mixed-methods study was conducted to fill a gap in the literature regarding postsecondary online students' preferences for instructor feedback. Researchers had not conducted a large-sample study describing online students' preferences. This study was needed to promote greater awareness among online instructors regarding students' preferences, which could result in a more collaborative feedback process to enhance students' writing skill development. Findings may increase the possibility of instructors using students' preferred methods, thereby increasing the likelihood of students reading and applying the feedback to improve their academic writing skills.

Study findings indicate that graduate students prefer proximal, detailed, supportive, timely feedback that includes track changes and rubrics. Students tend to prefer marginal balloon comments rather than in-line comments, and they prefer examples and external resources included in instructor feedback. In addition, students tend to not want grammar codes, instructors' personal reflections, or brief affirmations. Regarding the reasons for these preferences, findings indicate that students want feedback to promote their skill development, to justify point deductions, and to provide evidence that the instructor read the paper.

In Chapter 5, I interpret the findings in the context of previous studies. I describe ways in which findings align with or disconfirm results from previous studies. I also describe limitations of the study and provide recommendations for further research. I

conclude by describing implications for positive change in writing feedback practices at the study site and possibly in other postsecondary educational settings.

Interpretation of Findings

Most of the themes from my study aligned with results from previous research. In the following sections, I examine study findings in the context of previous studies. I interpret the findings according to major and minor themes, with the dominant themes addressed first. I also interpret the findings in the context of Vygotsky's social-constructivist theory, which was used to frame the study.

Detailed Feedback

The preference for clear, detailed feedback, one of the dominant themes from my study, was consistent with findings from Can (2009), Duncan (2007), Ferguson (2011), Glover and Brown (2006), Mulliner and Tucker (2015), Rae and Cochrane (2008), and Zacharias (2007). Riddell (2015) noted the significant body of research supporting detailed feedback as more effective than general feedback in enhancing writing performance. Gallien and Oomen-Early (2008) found that students who received personalized feedback scored significantly higher and were more satisfied with the course than those who received collective feedback. Vardi (2012, 2013) reported that personalized feedback on related assignments can be especially helpful in enhancing skill development. According to Poulos and Mahony (2008), effective feedback is timely and specific to the student's individual needs. Wolsey's (2008) finding that students preferred complex rather than simple affirmations aligned with data from my study.

Van der Kleij et al. (2015) conducted a mixed-model meta-analysis to investigate the influence of item-based feedback on student learning outcomes. Van der Kleij et al. found that elaborated feedback, which included explanations from the instructor, was more impactful than feedback that merely corrected the response or provided the results. Although Van der Kleij et al. limited their focus to feedback given to items on a test, their findings suggest that feedback that both corrects and provides an explanation for the correction increases the likelihood of student learning. This finding has implications for writing instruction in the postsecondary online environment and aligns with my participants' reported preferences for detailed, explanatory feedback. Van der Kleij et al. noted that elaborated feedback may include tips, learning resources, and explanations of the correct response, which also aligns with my participants' preferences for track changes, marginal comments to explain the changes, and external learning resources. Van der Kleij et al. found that elaborated feedback is more effective than corrective feedback or results feedback in promoting higher order learning outcomes, including application of principles to different learning situations.

Supportive Feedback

A strong preference among postsecondary students for supportive feedback, another dominant theme in my study, aligned with findings from previous studies. Mulliner and Tucker (2015) found that feedback should be timely, should include detailed direction for skill development, and should be delivered in a constructive, supportive manner. Weaver (2006) noted that tutors should monitor their response styles and should balance positive feedback with critical feedback while ensuring that

comments are aligned with assessment criteria and learning objectives. Weaver (2006) also found that, according to student participants, tutors did not provide enough feedback and did not include enough positive comments, which suggested a student preference for detailed, supportive feedback. Other studies indicated support for a balance between positive and negative comments (Can, 2009; Duncan, 2007; Ferguson, 2011; Smith, 2008; Treglia, 2008; Weaver, 2006). In addition, Poulos and Mahony (2008) observed that negative feedback had a demoralizing impact on students' motivation and learning.

My participants' reported preference for exploratory comments, questions, and complex affirmations was consistent with findings from several studies that indicated a preference for suggestive rather than directive feedback (Can, 2009; Mulliner & Tucker, 2015; Rae & Cochrane, 2008; Treglia, 2008). Some studies showed that instructors pay primary attention to lower-level issues rather than content issues and use a directive rather than a suggestive approach (Stern & Solomon, 2007; Szymanski, 2014). These findings contrast with my participants' reported preference for content-oriented feedback delivered via explorations and questions rather than directive comments.

Rubric Feedback

My participants' preference for rubric feedback, which was the least dominant of my major themes, aligned with Nordrum et al.'s (2013) finding that rubric-articulated feedback helped students understand the general issues with their writing and techniques for approaching future writing assignments. Nordrum et al. also found that rubric feedback was not as useful as in-text feedback, which served a corrective function as opposed to the evaluative function of rubric feedback. Students in Ferguson's (2011)

study reported a preference for customized comments and criteria-oriented comments explaining how grades were determined. This finding aligned with results from my study, which indicated that feedback was needed to justify the grade.

Poulos and Mahony (2008) found that students preferred consistency and transparency in assessment practices, clear alignment of feedback with assignment criteria, and prompt feedback combining comments and grades. Although Poulos and Mahony did not examine the use of rubrics directly, Poulos and Mahony's findings seem consistent with results from my study, which indicated students' preference for rubrics to justify deductions and to promote skill development. Riddell (2015) noted that providing students with a clear understanding of how their work will be assessed will increase the likelihood of students meeting assignment expectations. Although Riddell did not specify rubrics as a means of enhancing assessment awareness, this tool is often used for that purpose in postsecondary education. Participants in my study reported a clear preference for the inclusion of rubrics in the feedback process. Other researchers found that students prefer feedback that aligns with assignment criteria (Ferguson, 2011; Weaver, 2006; Wolsey, 2008). Participants in my study reported that feedback usually aligned with assignment expectations as presented in grading rubrics.

Alignment With Other Themes

My participants' preference for electronic feedback, another dominant theme, aligned with findings from Rae and Cochrane (2008) and Can (2009). In addition, my participants' preference for prompt feedback aligned with findings from Mulliner and Tucker (2015) and Poulos and Mahony (2008). Van der Kleij et al. (2015) observed that

students spend more time reading immediate feedback than delayed feedback, which may increase the likelihood of feedback promoting skill development. Wingate (2010) found that students with low self-efficacy as academic writers were less likely to value instructor feedback. This finding appeared to align with results from my study, which indicated that most participants considered their writing skills to be good. High self-efficacy may have been a factor in motivating participants' to volunteer for my study investigating students' preferences for instructor feedback. Most participants in my study reported that they always read the electronic feedback from their online instructors. This finding aligned with results from studies indicating that active students were more inclined to study and apply instructor feedback than passive students (Duncan, 2007; Rae & Cochrane, 2008; Wingate, 2010; Zacharias, 2007). Some participants reported an interest in receiving other types of feedback, such as audio and video; however, none of my interview participants reported that they had received these alternative types of feedback in their online courses. In addition, preferences for these alternative modes of feedback were mixed.

Budge (2011) reported that millennial students studying in a vocational brick-and-mortar setting did not prefer electronic feedback, which disconfirmed Budge's hypothesis that millennial students would favor the use of technology. Budge called for studies exploring online students' preferences, which my study addressed. My findings indicated that online students prefer electronic feedback delivered via software applications such as Microsoft Word. One of the major themes from my study, students' desire for proximal feedback, was not as widely supported in the literature. I did not consider this apparent

misalignment a discrepant finding. Rather, I concluded that online students' preferences regarding proximal feedback had not been widely addressed in previous studies. The preference for proximal feedback echoed Wolsey's (2008) findings that most students preferred comments that were located in the essay text. My participants' desire to use feedback to improve their writing performance on upcoming assignments aligned with several researchers' findings indicating support for feedback that promotes writing skill development in academic and professional contexts (Ferguson, 2011; Orsmond & Merry, 2011; Poulos & Mahony, 2008; Rae & Cochrane, 2008, Weaver, 2006). Regarding my finding that students want feedback to justify point deductions, Zacharias (2007) found that students valued feedback because teachers control grades.

Analysis of Findings in the Context of Social Constructivist Theory

My participants' preferences for supportive, detailed feedback aligned with Vygotsky's (1978) social constructivist theory, which positions instructor feedback as a scaffolding tool intended to move students through their zone of proximal development from other regulation to self-regulation. Students' reported preference for exploratory comments and questions indicates their desire for feedback that promotes independent thinking and encourages greater self-regulation as scholarly writers. Stine (2010) emphasized the need for online instructors to accommodate their students' preferences for electronic feedback, which aligns with the social-constructivist model of feedback as a collaborative, iterative process. Benko (2012) also encouraged instructors to customize their feedback based on students' preferences as part of the constructivist learning process.

Limitations of the Study

The study was limited by the participant self-selection process. Most of the students who chose to complete my survey were graduate students who were native English speakers who had considerable experience with online learning (more than four courses). In addition, most of the participants reported that their English writing skills were good, which means results may be limited to graduate-level online students with high self-efficacy as academic writers. This study was also limited by a focus on text-based feedback rather than other types of feedback such as audio, video, telephonic, and face to face. The study was also limited by the lower than expected number of survey responses. I had intended to collect 300 to 400 survey responses from two universities to enhance generalizability of findings. However, I was not able to secure a partnership with a second university. I pursued an agreement with two public universities with established online programs; however, after receiving conditional approval from IRB at each university, I was told by administrators of the online programs that I would not be able to collect survey or interview data. A final limitation of my study was that IRB regulations at the research site prevented me from soliciting student participation directly, which may partially explain why I was able to collect only 93 survey responses from the site over a 5-month period.

Recommendations

Future studies could involve multiple data collection sites, preferably both public and private postsecondary institutions, to enhance generalizability of findings. In addition, future studies could include more abundant data from undergraduate students,

nonnative English speakers, students with limited experience in online courses, and students with low self-efficacy as academic writers. Inclusion of a broader range of postsecondary online students would allow for testing for variation of preferences based on grade level, online experience, English-language status, and age. In addition, future studies could be done to compare students' preferences based on other demographic variables such as gender and ethnicity. Finally, future studies could include modified survey and interview questions to probe other aspects of postsecondary online students' preferences for instructor feedback, such as interest in audio or video feedback.

Implications

The primary implication for social change is the potential improvement of writing feedback practices among faculty and instructors at the study site. Results may promote increased awareness of and sensitivity to students' preferences for feedback. Results may also encourage instructors to engage in a more iterative approach that incorporates students' preferences for proximal, detailed, supportive, timely feedback that would increase the likelihood of promoting students' skill development. Results may challenge faculty and instructors who had previously privileged their preferences in the feedback process or who had thought their practices were ideal for promoting skill development. Instructors who had been providing the types of feedback reported by students as preferable in this study may be encouraged to continue using these practices and may explore other ways to support students' preferences to promote their skill development and self-efficacy. Results may also be considered by faculty and instructors in other

online universities and in traditional universities that include online courses as part of their degree programs.

Conclusion

This study was conducted to raise awareness of postsecondary online students' preferences for instructor feedback. Instructors who privilege their preferences may consider the instructional efficacy of accommodating students' preferences in the feedback process. A constructivist approach informed by awareness of students' preferences may enhance the feedback process, thereby increasing the likelihood of students reading the feedback and applying it on upcoming assignments. By embracing feedback as an iterative, collaborative process, students and instructors may enjoy a more productive teaching and learning experience.

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Appendix A: Survey

Definitions of Important Terms Used in the Survey

Balloons: Text bubbles containing comments inserted by readers. For example:

Electronic feedback: Comments and/or corrections provided by instructors in software applications such as Microsoft Word and Turnitin GradeMark.

Grammar codes: Abbreviations for common grammar errors (e.g. S/V for subject-verb agreement, RO for run-on sentence, Sp for spelling)

Grading rubric: A set of guidelines explaining categories that will be used when an instructor grades an assignment (e.g. content, organization, grammar, style). Available points are often included for each category.

Track changes: An editing feature in MS Word in which changes are preserved in the text. Readers can customize how the changes appear (e.g. colors, underlined, bolded, etc.). Here is an example:

1. I prefer to have online instructors correct my errors using **track changes**. (Choose one)
    a. Strongly agree
    b. Slightly agree
    c. Neutral
    d. Slightly disagree
    e. Strongly disagree

2. I prefer to have online instructors include comments to explain their corrections. (Choose one)
    a. Strongly agree
    b. Slightly agree
    c. Neutral
    d. Slightly disagree
    e. Strongly disagree

3. I prefer to have online instructors' comments appear: (Choose one)
    a. Within my essay text
    b. In **balloons** in the margin of my paper
    c. Neither

4. I prefer to have online instructors use **grammar codes** when identifying errors in my assignments. (Choose one)
    a. Strongly agree
    b. Slightly agree
    c. Neutral
    d. Slightly disagree

e. Strongly disagree

5. I prefer to have online instructors include the following when grading my assignments. (Choose one)

a. Corrections only
b. Comments only
c. Corrections and comments
d. Neither corrections nor comments
e. Highlighted errors but no corrections or comments
f. Other (please describe _____)

6. I prefer to have an online instructor: (Choose one)

a. Insert comments throughout my paper
b. Type a long comment at the end
c. Neither
d. Both

7. I always review my online assignments for electronic feedback from my online instructor. (Choose one)

a. Strongly agree
b. Slightly agree
c. Neutral
d. Slightly disagree
e. Strongly disagree

8. I have found that the **electronic feedback** provided by online instructors has been helpful in developing my writing skills. (Choose one)

a. Strongly agree
b. Slightly agree
c. Neutral
d. Slightly disagree
e. Strongly disagree

9. Considering the types of instructor comments listed below, which one(s) do you prefer? (Choose as many as apply)

a. Simple affirmations (e.g. Good point! Nice job!)
b. Complex affirmations (e.g. You made a great point here because….)
c. Explorations (e.g. You might also consider….)
d. Personal reflections (e.g. Your point reminded me of an experience I had….)
e. Clarifications (e.g. Studies actually show that…. I think the author was trying to say….)
f. Observations (e.g. I wasn't aware of this…. I came to the same conclusion….)
g. Questions (e.g. Do you mean…? What about…?)
h. Corrections to content (e.g. This point is confusing because…. Please develop your ideas here by….)
i. Corrections to mechanics such as spelling, grammar, punctuation, capitalization, etc.

10. I prefer online instructors to include completed **grading rubrics** with their electronic feedback. (Choose one)
    a. Yes
    b. No

11. In my online courses, the instructor's electronic feedback is consistent with the grading rubric. (Choose one)
    a. Strongly agree
    b. Slightly agree
    c. Neutral
    d. Slightly disagree
    e. Strongly disagree

12. I consider my English writing skills to be very good. (Choose one)
    a. Strongly agree
    b. Slightly agree
    c. Neutral
    d. Slightly disagree
    e. Strongly disagree

13. In your own words, please explain how you prefer to receive electronic feedback from your online instructors in your writing assignments.

14. In your own words, please explain why you prefer certain types of electronic feedback from instructors but not others.

15. How much experience have you had receiving electronic feedback in online courses? (Choose one)
    a. 1 course
    b. 2-4 courses
    c. More than 4 courses

16. I am the following: (Choose one)
    a. Undergraduate student
    b. Graduate student

17. English is my first language. (Choose one)
    a. Yes
    b. No

18. My age is: (Choose one)
    a. 18-20
    b. 21-24
    c. 25-29
    d. 30-34
    e. 35-39

f. 40-44
g. 45-49
h. 50-54
i. 55-59
j. 60-64
k. 65+

19. My area of study is: (Choose one)
    a. Business
    b. Information Technology
    c. Health Sciences
    d. Social Sciences
    e. Humanities
    f. Other (please indicate _____)

Separate page:

Are you willing to participate in a 30-45 minute follow-up interview? If so, please send an email to XXXX.

Appendix B: Interview Questions

1. One of the survey questions asked you how you feel about instructors correcting your writing errors by editing them with track changes. How do you like to have your errors addressed electronically? Why?
2. Please describe where you like instructor comments to appear in your papers. What are the reasons you like that approach?
3. One of the survey questions asked about your preference for grading rubrics, which describe how well you met assignment expectations in categories such as content, organization, grammar, and style. How do you feel about the use of grading rubrics?
4. In your survey, you indicated that you liked certain types of comments but not others (e.g. simple affirmations, questions, corrections). Please explain why you like some types of comments but not others.
5. Please describe a positive experience you had with an instructor's electronic feedback in an online course. Why did you find the feedback helpful?
6. Please describe a negative experience you had with an instructor's electronic feedback in an online course. Why did the feedback seem unhelpful?
7. The survey focused primarily on text-based feedback such as track changes and comments. What other types of electronic feedback do you prefer (for example, audio comments, video files, or something else)? Why do you like this type of feedback?
8. When you think about your development as an academic writer, how has your online instructor's electronic feedback helped you improve your skills? What types of feedback have not been helpful? Why?

Appendix C: Budge Permission for Survey Instrument

Hi Joseph,

Thanks for getting in touch. Yes, it's fine to use some of the questions from my 2011 study on student perceptions of electronic feedback. All I ask is that you acknowledge the source in your thesis and in any relevant publications.

Good luck with your research.

Kylie.

Dr Kylie Budge
[redacted]

From: Joseph Gredler [redacted]
Sent: Monday, 17 August 2015 4:34 AM
To: Budge, Kylie
Subject: Permission to borrow portions of a research instrument

Hello, Dr. Budge. I am preparing a dissertation study and would like to borrow some of the questions (with slight modifications) you used in your 2011 study "A Desire for the Personal: Student Perceptions of Electronic Feedback." The title of my study is "Tertiary Online Students' Preferences for Instructor Feedback Delivered Electronically Via Software Applications." I am conducting a sequential explanatory mixed-methods study in which data will be collected from [redacted]. I would be happy to provide a copy of my proposed survey and interview questions for your review. Please let me know if you need further information. Thank you for your consideration.

Joe Gredler

Joseph Gredler
[redacted]

Appendix D: Wolsey Permission for Survey Instrument

Hi Joe,

Congratulations on getting to the dissertation stage. I have a question for you: Would the names of the universities be anonymous and confidential in your dissertation and any articles, etc. that you write from it (other than your affiliation, of course)? If so, you have my permission, and I'd love to look at the questions and provide any feedback you might request.

Sincerely,
Tom

From: Joseph Gredler
Sent: Sunday, August 16, 2015 11:11 AM
To: [redacted]
Subject: Permission to borrow portions of a research instrument

Hello, Dr. Wolsey. I am preparing a dissertation study and would like to borrow some of the questions (with slight modifications) you used in your 2008 study "Efficacy of Instructor Feedback on Written Work in an Online Program." The title of my study is "Tertiary Online Students' Preferences for Instructor Feedback Delivered Electronically Via Software Applications." I am conducting a sequential explanatory mixed-methods study in which data will be collected from [redacted]. I would be happy to provide a copy of my proposed survey for your review. Please let me know if you need further information. Thank you for your consideration.

Joe Gredler