Embracing Digital Feedback: Exploring Writing Instructors' Adoption and Potential of Feedback Technologies

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ABSTRACT

This study examines the use and implications of feedback technology in First-Year Composition (FYC) programs, addressing a critical gap between the application of general and feedback-specific technologies. Through surveys and interviews with FYC instructors at a large public university, findings reveal that while Microsoft Word is the dominant feedback tool, interest is growing in alternative digital platforms like Google Docs and screen-casting. A key finding is that the primary motivation for instructors' adoption of feedback technology lies in their familiarity with these tools. The research highlights the need for systematic training for both instructors and students to effectively utilize feedback technologies, with an emphasis on quality over quantity in training sessions. Additionally, the study underscores the importance of personalized interactions to complement digital feedback mechanisms. By advocating for continuous professional development and mentoring for educators, the study contributes valuable insights into enhancing the efficacy of feedback in composition courses. This research ultimately supports the evolution of feedback practices to better align with technological advancements and pedagogical needs.

Keywords: *Feedback technology, writing instructors, digital feedback, written feedback, oral feedback*

Introduction

The integration of technology within writing classrooms has become a hallmark of modern education and is expected to remain essential throughout the past 15 years. Notably, many first-year composition (FYC) instructors at American universities are incorporating technology into their courses, both inside and outside the classroom. This ranges from the more ubiquitous and user-friendly Microsoft Office Suite software to newer and more challenging technologies such as podcasts and websites. These newer technologies represent an innovative approach to providing writing feedback. For example, podcasts offer a dynamic platform where educators can provide auditory feedback, enabling students to discern tone and emphasis, thus enhancing their understanding of nuances in commentary. Similarly, websites offer interactive features such as real-time annotations, collaborative editing tools, and discussion forums, which facilitate a more engaged and responsive feedback process.

In addition to these technologies, SMS texting and social media platforms have been explored as pedagogical tools for providing writing feedback. SMS texting offers potential for quick and concise feedback, with research by Danisheh (2011) indicating that this method allows teachers to deliver prompt responses, reminders, and brief tips directly to students' phones, thereby making feedback more immediate and accessible. Moreover, social media platforms like Facebook create virtual learning communities, as noted by Reid (2011), where students can share their writing, comment on each other's work, and receive feedback from both peers and educators. This collaborative approach leverages the interactive nature of social media to enhance the traditional feedback process and fosters a supportive learning environment.

The recent pandemic has further highlighted the importance of cutting-edge educational technologies in writing classrooms. My research aims to identify the types of technology instructors use when providing feedback to students and their motivations for using these

feedback technologies. Unlike previous research, which has predominantly focused on L2 English writing (Diab, 2006; Paulus, 1999; Lee & Schallert, 2008), my study extends to both L1 and L2 English composition classrooms. The objective is to identify patterns and distinctions among these groups to achieve a comprehensive understanding of feedback technology.

This research will explore the changing demographics of technology use in first-year composition (FYC) classes for domestic and international students at a large public university in the US, and how these are related to instructors' motivations for using feedback technology. Specifically, the main research questions are:

1. What types of technology, including feedback technology, have FYC instructors used in writing courses over the past 15 years?
2. How do FYC instructors utilize feedback technology for students?
3. Why do FYC instructors prefer specific feedback technology methods?

This paper aims to contribute to the training of future writing instructors in the use of feedback technology, enhance the pedagogical implementation of such technologies in first-year composition classes, and ultimately improve students' writing skills.

Literature Review

The connection between technology and composition in a writing class lies in the shared goal of achieving effective communication. In *Composing Yourself*, the required textbook in first-year composition (FYC) at a large public university in the US, in which one of the five shared goals for composition is technology: "To provide students with experience using multiple composing technologies to produce a variety of genres of texts" (p.6). In my previous research about goal analysis of writing classes (Park, 2014), FYC instructors rank technology the lowest priority than

other goals, such as Rhetorical Knowledge, Critical Thinking, Reading, and Writing, Writing Process, and Knowledge of Conventions, while students rank technology higher than instructors.

Given this finding alone, we cannot derive substantial implications about instructors' perceptions. Further analysis and additional data are required to draw meaningful conclusions regarding the role of technology in teaching, including the use of feedback technology. Some studies highlight the notion that technology is not always viewed as the most crucial factor in effective teaching. Deeley (2017) discusses how various technologies can enhance assessment and feedback processes. However, the author emphasizes that the underlying pedagogical approach and the partnership between staff and students are more critical than the technology itself. Deeley argues that while technology can facilitate feedback, it is the alignment of assessment practices with learning objectives and the development of students' assessment literacy that ultimately drive effective learning outcomes. This perspective suggests that instructors may perceive technology as a supportive tool rather than the central element in teaching effectiveness.

In another research (Pardo et al., 2017), the authors suggest that instructors' experiences and opinions are crucial in understanding the effectiveness of technology in feedback provision. This indicates that while technology can enhance feedback, instructors may not consider it the most critical factor in their teaching practices, as their pedagogical strategies and engagement with students remain paramount. Both illustrate that while technology plays a role in facilitating feedback and assessment, instructors often prioritize pedagogical approaches and student engagement over the mere use of technological tools. This reflects a broader understanding that effective teaching encompasses more than just the integration of technology.

Feedback

Traditional feedback in writing typically involves handwritten notes or comments provided on a printed document. This feedback is often given in person, during a one-on-one meeting or within the classroom setting. The instructor or reviewer reads through the hard copy of the written work and makes annotations, corrections, and suggestions directly on the paper. This method allows for personalized feedback, providing the writer with a tangible reference to guide their revisions.

Electronic feedback, on the other hand, is given through digital platforms and tools. This may include comments and suggestions added to a document using word processing software, or feedback provided through online learning management systems, email, or other digital communication methods. Electronic feedback can incorporate various multimedia elements, such as hyperlinks, videos, and voice recordings, to offer more dynamic and comprehensive guidance. It also often allows for quicker turnaround, easier organization, and the ability to track changes and revisions electronically. In sum, while traditional feedback in writing is typically handwritten and given in person, electronic feedback leverages digital tools to offer more versatile, efficient, and often more interactive methods of providing guidance and suggestions.

Regarding feedback, the terms, both computer mediated (Ducoate & Arnold, 2012; Serer, 2012) and electronic feedback (Tuzi 2004) are used commonly depending on the discipline. Ware & Warchauer (2006) pointed out that “electronic feedback often refers to automated feedback provided by a computer,” but also “the term electronic indicates the means by which human feedback is provided.”(p. 105) Students may think the former definition of e-feedback when they use spell-check or autocorrect by conducting a self-correction. The latter term emphasizes the interaction between humans.

This study focuses on the written feedback methods employed by First-Year Composition (FYC) instructors and their motivations for using these methods. It encompasses a range of feedback technologies, from traditional paper-and-pen methods to advanced internet-based and computer-mediated feedback technologies. Therefore, I will use the term "feedback technology" throughout this paper.

Feedback Technology

Many scholars emphasize the effectiveness of technology use in feedback (Ducate & Arnold, 2012; Serer, 2012). On the other hand, Liu and Sadler (2003) showed the differences between computer-mediated communication and face-to-face interaction. While online or Multi-user domain, Object-Oriented (Moo) interaction was more appealing to students, face-to-face interaction was more effective according to the findings. They suggested that combing two versions as procedures, both electronic and traditional interaction will serve students most effectively in L2 writing classroom. Burston (2001) analyzed the computer-based composition annotation program Markin32 and found that it positively impacts feedback quality and reduces correction loads for instructors. However, it is evident that both teachers and learners must acquire technological literacy before deciding to use the technology.

There are definite effects and certain advantages of technology-mediated feedback, but there are also some requirements and limitations. Levy (2009) indicated that technology training for instructors is crucial if they are to integrate these technologies optimally. To fully harness the benefits of technology-mediated feedback, instructors need adequate training in using these tools effectively. This training is essential not just for understanding how the technology itself works, but also for developing strategies to incorporate it seamlessly into their teaching practices. Without proper training, instructors may struggle with the technical aspects of feedback

technology, which can lead to inefficiencies and a potential decrease in the quality of feedback provided. Additionally, certain limitations, such as accessibility issues for students and potential over-reliance on technology, must be addressed. Therefore, ongoing professional development and institutional support are necessary to ensure that both instructors and students can fully benefit from the integration of feedback technology.

The effectiveness of feedback is a multifaceted concept influenced by various factors including uptake by students, improvement in performance, and self-reported experiences. Cohen (1987) and Ferris (1995) pointed out that students expect corrective feedback, and Biber, Nekrasova, and Horn (2011) showed in their meta-analysis that written feedback is more effective than oral feedback. However, Biber, Nekrasova, and Horn argued that feedback from peers can be more effective than feedback from teachers. This finding was based on research that included students trained to provide continuous feedback, which may not always be the case in every educational setting. Generally, teacher feedback is considered the most significant factor as they grade students' papers.

Furthermore, Bitchner, Young, and Cameron (2005) claimed that a combination of oral and written feedback is the most effective for students. To fully harness the benefits of technology-mediated feedback, instructors need adequate training in using these tools effectively. Levy (2009) indicated that technology training for instructors is crucial if they are to integrate these technologies optimally. This training is essential not just for understanding how the technology itself works but also for developing strategies to incorporate it seamlessly into their teaching practices. Without proper training, instructors may struggle with the technical aspects of feedback technology, leading to inefficiencies and a potential decrease in the quality of feedback provided. Therefore, ongoing professional development and institutional support are

necessary to ensure that both instructors and students can fully benefit from the integration of feedback technology.

When using technology in the classroom, the instructor's decision-making plays a key role. If instructors decide to utilize educational technology in their classrooms, students may have more opportunities to learn and engage with new technologies. Stahmer, Suhrheinrich, Reed, and Schreibman (2012) demonstrated that the proper implementation of technology can significantly benefit students in special education. Their research highlights the importance of using teacher feedback to inform adaptations of pivotal response training for classroom use, illustrating how thoughtful integration of technology can enhance educational outcomes.

Based on this reason, Scheeler (2008)'s study focuses on teachers' perspective rather than students' one. In terms of feedback, if instructors use technology for feedback, it will eventually benefit both instructors and students by enhancing the technological literacies . Before dealing with the effectiveness of feedback technology use, examining teachers' motivation to use it give more insights to teachers and eventually to students for the pedagogical improvement of quantity and quality of teachers' future feedback.

Based on this reasoning, this study focuses on teachers' perspectives rather than those of students. Scheeler (2008) emphasized the importance of understanding teachers' viewpoints to improve educational practices. In terms of feedback, if instructors use technology for providing feedback, it will eventually benefit both instructors and students by enhancing technological literacies and improving the overall feedback process. Before addressing the effectiveness of feedback technology, examining teachers' motivations to use it provides valuable insights that can lead to pedagogical improvements. Understanding these motivations can help refine

feedback practices, ultimately improving the quantity and quality of feedback that teachers provide to their students.

There has been a gap in the literature regarding instructors' motivation in the use of feedback technology. Jensen, Bearman, & Boud (2021), providing a comprehensive overview of the significance of immediate feedback in education, makes a robust case for the necessity of immediate feedback in educational contexts. By highlighting its advantages over delayed feedback, exploring the psychological foundations of its effectiveness, and providing practical recommendations for educators, the author underscores the critical role that immediate feedback plays in enhancing student learning outcomes. The paper serves as a call to action for educators to prioritize the development of this essential skill in their teaching practice. Teclehaimanot, Mentzer, & Hickman. (2011) showed that the lack of confidence and lack of knowledge of technology prevented teachers to integrate technology in their classrooms, however this study does not address the issue of motivation of feedback tech use.

Methods

Participants

First year composition is composed of three different classes at a large public university in the US. One for international students, the other two courses are for domestic and international students. The class size limit is either 15 students (106i) or 20 students (106 and 108). The course consists of lectures and conferences, but writing courses for international students generally offer more one-on-one conferences than lectures (see Table 1). Among survey participants (n=42), 24 instructors were from English 106 (general FYC course), 18 from 106i (international FYC course), and three were from 108 (accelerated FYC course) at a large public university. In terms of language background, 30 participants were native English speakers from

the USA, six were native Chinese speakers, four were native Korean speakers, and four were speakers of other languages. Female instructors (n=28) were more than male (n=16). Thirty instructors (69%) have within two years of teaching experience at a large public university. Of the instructors, 27 are under 30 years old and 15 are over 30, indicating that while the age range is diverse, it is skewed towards younger instructors.

Data Collection

Survey

Data collection for this study involved two distinct approaches: a survey and follow-up interviews. Utilizing Qualtrics, a web-based survey software, the survey questionnaire link was distributed to First-Year Composition (FYC) instructors at a large public university via the FYC instructors' email list. The survey comprised twenty-three items, and forty-four FYC instructors participated in the study.

Table 1 details the structure and requirements of various First-Year Composition (FYC) courses. General FYC (106) and Accelerated FYC (108) favor lectures over conferences. In contrast, FYC for International Students (106i) emphasizes one-on-one conferences over lectures, catering to smaller groups of 15 students. This course, with 31 sections, is tailored for students with TOEFL scores under 100 or lower sub-scores (under 26), providing support for non-native speakers.

Table 1

First Year Composition courses at a large public university

FYC	General FYC (106)	Accelerated FYC (108)	FYC for International (106i)
Students (N)	20	20	15
Structure	lecture > conference	lecture > conference	lecture < conference
Options for Intl. Students	TOEFL score over 100 (over Sub 26)	TOEFL score over 100 (over Sub 26)	TOEFL score under 100 (Under Sub 26)

The main survey questions focused on identifying the primary feedback technologies used by FYC instructors and exploring their motivations for choosing these methods. Various examples of feedback technology, ranging from paper and pen to screen-casting, were provided, and respondents were asked to indicate the most effective method. The survey also examined instructors' general perceptions of technology and feedback technology. Respondents were given twelve motivations to select from (See Table 2) and asked to rate them using a six-point Likert scale, ranging from strongly disagree to strongly agree. The survey consisted of twenty-three questions, with nine questions gathering background information and fourteen questions addressing instructors' use of feedback technology. These questions were designed as free-response questions, and the responses were coded using Qualtrics. To analyze the collected data, Qualtrics were utilized. The analysis is presented through tables and a few bar charts.

Table 2

Survey Questionnaires

Main Survey Items
What is your primary feedback technology for First-Year Composition (FYC) courses?
What motivates you to use this feedback technology?
Please rate the effectiveness of various feedback technologies (e.g., paper and pen, screen casting) on a scale from strongly disagree to strongly agree.
Describe your typical process for providing feedback in FYC courses.
What are the primary advantages and disadvantages of the feedback technology you use?

Interview

Fourteen instructors participated in face-to-face interviews, and six instructors were interviewed via email. I contacted volunteers using the email addresses provided in the survey, and for email interviews, I sent a reminder after one week. Among ten participants, five instructors are from English 106 (general FYC course) and five from 106i (international FYC course). In the follow-up interview, more open-ended questionnaires and semi-structured interviews were conducted at a deeper level to investigate in detail how instructors utilize feedback technology. For instance, the main motivation for instructors to use feedback technology, and the role of technology mentoring and professional training and whether feedback technology is a tool or essential were asked. Table 3 presented the framework of the questions. These questions aim to elicit detailed responses about instructors' use of feedback technology, their motivations, and the challenges they encounter.

Table 3

Interview Questionnaires

Main Items in Interview
Can you provide examples of feedback technology that you use in the classroom or during conferences?
How do you use feedback technology differently for first drafts, second drafts, and final drafts of student assignments?
What is the main reason you choose to use feedback technology in your teaching practices?
What challenges do you face when using feedback technology in your courses?
How does your university support the use of feedback technology in your teaching?
Do you consider feedback technology to be an optional tool or an essential tool in your teaching? Why?
What effects have you observed from using feedback technology on student learning and engagement?

Data Analysis

To analyze the data collection, the survey software Qualtrics was utilized, and descriptive statistics were used. A thematic code analysis was used for the interview data. The coding was determined based on recurring themes and patterns identified in the responses, which were categorized and analyzed systematically using both inductive and deductive approaches (Teclehaimanot, Mentzer, & Hickman, 2011). Data analysis of the findings was organized in major categories: teachers' perception of general technology use in classroom and feedback technology; their interactions with feedback technology depending on the different process (first draft, second draft, and final draft) and possibly grading; how they use technology differently

(revision, correction, comment); their concerns; their limitation of technology use in feedback; their suggestion to future professional development.

Findings

Based on the survey results, general teaching information of FYC instructors related with giving feedback for students is as follows. FYC Instructors spend 5.49 hours on average per week. In terms of using diverse methods, more than half, 56 % of teachers use their primary feedback method for all three drafts while 44% of teachers changed their feedback method depending on the first, second, and final drafts. About the quantity of feedback, 59% of them give feedback to students for the first draft the most and 32% of them do for the second draft, and only 10% of them give it to students for the final draft the most. Over three quarters of instructors (81%) answered that they receive responses from students to their feedback.

The various feedback technology methods that the first-year composition (FYC) instructors are using recently are introduced. This reflects the changing typology of feedback technology in FYC classes in the 21st century. And then the primary method of feedback technology of FYC instructors and how and why they use it are shown. At last, correlation between technology and feedback technology use is checked.

Technology vs. Feedback technology

Most teachers (90%) responded that technology for writing teaching is important and 78% of them answered that the use of feedback technology is important. If both are compared in detail, 56% of teachers agree general technology use is important while only 26% of teachers perceive the use of feedback technology is extremely important. Table 4 shows the responses to the question: "Rate the importance of general technology use in a writing course."

Table 4

Rate the importance of general technology- use in writing course

Importance Level	Number of Responses
Not at all Important	0
Very Unimportant	2
Somewhat Unimportant	2
Somewhat Important	*14
Very Important	*19
Extremely Important	*4

This table shows how students or respondents rated the importance of using technology in a writing course, with the majority finding it "Very Important" or "Extremely Important." Based on the question "Rate the importance of advanced feedback technology use in a writing course", here's the data represented in Table 5. This table illustrates the ratings provided by respondents regarding the use of advanced feedback technology in writing courses, with the highest frequency of responses indicating it is considered "Very Important."

Table 5

Rate the importance of the advanced feedback-technology use in writing course

Importance Level	Number of Responses
Not at all Important	2
Very Unimportant	0
Somewhat Unimportant	7
Somewhat Important	*22
Very Important	*8
Extremely Important	*3

The results of the interview parallel the survey results in several significant ways. One interviewee, in particular, emphasizes the critical importance of incorporating technology to provide and receive feedback:

> Technology is important for feedback, both as an outside-the-class way of communicating with students, but also as a way to help us respond to the innovative, diverse projects our composition students work on. (Interviewee 5)

Another interviewee expanded the use of feedback technology to the students,

> I not only use technology for my own feedback, but I encourage students to engage in the same methods. For instance, I have them peer reviewed once in hardcopy and once digitally in the lab. I do this 1) So the students can become more familiar with the programs (Adobe PDF and Word) and 2) because there are benefits to each. In a world that is so technology-centered, it is important for students to be exposed to the standard programs, to be computer literate as well as 'traditionally' literate, and for them to practice and understand the technologies that can help improve their learning. I could not imagine teaching a composition course without using technology in the classroom or on my own as I create lesson plans, provide feedback, and communicate with my students. (Interviewee 8)

They stress that the utilization of advanced feedback mechanisms can greatly enhance learning outcomes, improve performance, and foster better communication among team members. Furthermore, this interviewee underscores that leveraging technology for feedback not only streamlines processes but also helps in accurately capturing and addressing specific areas that need improvement. This observation aligns closely with the overall findings from the survey,

which also highlight a strong preference for and positive impact of feedback technology on organizational efficiency and individual growth.

The motivations for instructors to use feedback technology are summarized in the following analysis. Table 6 presents main summary for the survey item, "What are the reasons for using feedback technology?"

Table 6

Survey Main Item: "What are the reasons for using feedback technology?"

#	The reasons of using feedback technology
1.	Time saving
2.	Familiarity of Feedback method to instructors
3.	Familiarity of Feedback method to students
4.	Popularity of Feedback method to instructors
5.	Popularity of Feedback method to students
6.	Two-way Communication
7.	Speedy Delivery of Feedback
8.	Security of Feedback
9.	No Need of Carrying Paper
10.	No Need of Carrying Computer
11.	Legibility of teacher’s handwriting
12.	Recommendation of Department

Most interviewees concur that in the current information age, utilizing feedback technology is indispensable. One interviewee noted that “keeping up with paper is impossible” (Interviewee 1), while another emphasized that these technological methods are “clear and the fastest way” (Interviewee 2) to deliver feedback to students. Teachers highlighted challenges such as the collection and accumulation of paper assignments in their responses.

Writing instructors mentioned that one of main reasons is accessibility: Students have "equal access," (Interviewee 3), "access 24/7" (Interviewee 4), and feedback tools are "easy to use" (Interviewee 4) and "easy of communication" (Interviewee 5) for teachers. Writing instructors are concerned about both their own perspectives and those of their students. Another significant reason for using feedback technology is that teachers do not need to rush or worry about losing data, allowing them to remain organized. Additionally, feedback technology offers more functionality and better visual aids (Interviewee 6). Keeping track and convenience are also the main reasons. (Interviewee 7) Except for two interviewees, eight interviewees were aware of the benefit in using feedback technology and highly recommended use feedback technology.

Exploring Feedback Technologies: Pen vs. Digital Tools in FYC Courses

In First-Year Composition (FYC) courses, instructors have a variety of tools to provide feedback, with traditional pen-and-paper methods and digital tools like MS Word each offering distinct advantages. The choice of technology can shape the feedback experience for both students and instructors, impacting accessibility, clarity, and engagement.

According to the survey results (See Table 7 below), two methods are selected as FYC instructors' main feedback technology methods: (MS)Word and Pen. The instructors were asked what kind of feedback tech methods they were using for their courses. The first column shows all of the feedback methods chosen, then the main method of feedback, and finally the ideal method according to the research survey. Upon closer examination, computer- or internet-mediated feedback technology, such as MS Word Office and particularly MS Word comments, is chosen by most instructors as the most commonly used method (93%). Additionally, it is identified as the main method (34%) and the ideal method

(39%) if there are no constraints such as time or location. This preference underscores the significant role of MS Word in facilitating feedback. Traditional feedback, paper and pen is also chosen as one of the most main methods (34%) and the most common methods instructors used (86%). However, only 12% of teachers selected this as an ideal feedback technology method. Other methods such as Skype (2%), and Screen-casting (5%) were also selected for ideal method.

Table 7
Feedback Technology Methods

#	Feedback Technology Methods	Multiple Choice (#)	Main (#)	Ideal (#)
1	MS Word comments	*93% (42)	*34% (20)	*39% (16)
2	Paper and pen	*86% (39)	*34% (20)	12% (5)
3	Direct email comment	*66% (29)	2% (1)	2% (1)
4	MS Word track changes	*64% (29)	15% (9)	2% (1)
5	Direct comment on course website	48% (21)	7% (4)	2% (1)

MS word comments (93%) and paper and pen (86%) are the two most popular feedback technologies. MS word track changes (64%) and direct email (66%) or course website comments (48%) are used by FYC instructors frequently. If MS word comments and track changes are combined, MS word is the top feedback technology used. Most teachers (63%) expect their teaching evaluation will be positively affected due to their use of technology for feedback, although one teacher pointed out it is too early to predict. This is a surprising result as the pen and paper option was popular in current use but was not an ideal option for them.

It is important to note that 22% instructors out of 34% who chose other methods as ideal, 11 out of 14 specify ‘face-to-face conferences’ as an ideal feedback technology method. Teachers responded in a survey that new other methods such as blackboard, social media (Mixable), skype, and screen-casting were adopted as well. Other technology like google docs/chat, PDF commenting, and Dropbox are provided by the teacher.

Specifically, 34% of instructors prefer other methods, such as face-to-face conferences or audio/video verbal feedback. Their preference for oral feedback reflects a blend of both traditional and digital approaches. Since FYC courses at a large public university typically include one-on-one or small group conferences as part of the class structure, this may influence these results. While paper and pen can be considered traditional feedback technologies, in-person communication remains an analogue method not directly related to technology. However, through the pandemic, the use of voice messages and the availability of technologies like Zoom, Skype, and Google Meet have become more prevalent. As a result, the increased use of digital communication tools has likely influenced these preferences in the post-pandemic era.

In one face-to-face interview, one teacher also pointed out clearly the importance of oral communication with students,

> I want to note that I think that with any written communication (feedback or otherwise), there is a higher likelihood that students will ignore/disregard/not notice it, which is why I think face-to-face conversations generally have the most positive effect on students' writing. That said, one of the perks of written feedback is that it gives me the opportunity to clarify and revise my thoughts. I've never

> been in a situation where I've had to use Skype for feedback, but it may have a similar effect as [an] in-person conversation (Interviewee 1).

Teacher Approaches to Feedback Technology in FYC Courses

Instructors in First-Year Composition (FYC) courses utilize feedback technology in diverse ways to enhance student learning. Whether through annotated digital comments or handwritten notes, teachers adapt their feedback methods to suit different instructional goals, making use of technology to improve clarity, efficiency, and personalization in their responses.

There are three stages in the writing process. According to the interviews, most instructors responded that they provide global feedback on the first draft, local feedback on the second draft, and shorter feedback accompanied by grading on the final draft. Interviewee 2 stated, "In the first draft, I give feedback about content, organization, and meaning. In the second draft, I give whole comments, including grammar and vocabulary, using error correction and symbols." Interviewee 3 mentioned, "In the first draft, I focus on the main two or three problems." Interviewee 4 added, "I use my feedback either for reference when they turn in a subsequent draft, or for my own personal edification."

According to the interview, most instructors give global feedback on the first draft, local feedback on the second draft, and short feedback and grading on the final draft.

Instructors' Motivation for Using Feedback Technology

Instructors are motivated to use feedback technology to make their responses more accessible, efficient, and personalized. By leveraging digital tools, they can provide clearer, faster feedback and engage students more effectively, tailoring their comments to meet individual learning needs and streamline the revision process.

As the summary statistics is shown in Table 8, six out of twelve motivations are presented. The top three reasons to use feedback technology are "familiarity of feedback technology" method with both instructors and students. "Time saving" follows that. It is interesting to observe that writing instructors value 'two-way communication, legibility of their handwriting, and speedy delivery of feedback' as important. Familiarity with feedback method is more important than its popularity with feedback method for both teacher and students. The number of response agreements are the numbers which are added up three Likert scales from somewhat agree, agree, to strongly agree out of six Likert scales (strongly disagree, disagree, somewhat disagree, somewhat agree, agree, strongly agree). Neutral is excluded to draw more distinctive results. Instructors also specified other reasons to choose the main feedback methods: Instructors can revisit their feedback later and they type faster than write.

Table 8

Summary Statistics

#	The reasons of using feedback technology	#Ag	N	Mean	SD
2	Familiarity of Feedback method with instructors	*38	39	5.10	0.79
3	Familiarity of Feedback method with students	*31	39	4.46	1.29
1	Time saving	*30	40	4.33	1.42
6	Two-way Communication	29	39	4.38	1.27
11	Legibility of teacher's handwriting	29	39	4.31	1.36
7	Speedy Delivery of Feedback	28	38	4.32	1.21

Note: #Ag indicates that the number of Agreement (somewhat agree, agree, strongly agree)

Discussion

Based on a comprehensive analysis of survey and interview data, it is evident that First-Year Composition (FYC) instructors, now recognize the significance of integrating technology

into writing pedagogy, particularly for providing feedback. Nevertheless, a notable gap exists between the general utilization of technology in writing instruction and the specific application of feedback technologies.

Microsoft Word emerges as the predominant method for delivering feedback among FYC instructors, despite critiques regarding its lack of excitement and innovation. “MS Word is already boring, not exciting," as one interviewee remarked. While traditional methods of written feedback, such as paper and pen, remain in use, the advent of digital tools, especially MS Word comments, has begun to supplant these older practices as the primary means of feedback within FYC courses. This result is specifically limited to the group of teachers interviewed in this study. However, it aligns with previous research indicating a shift towards digital feedback tools in educational environments (Delgado & Hidalgo, 2020). The authors suggest that the shift towards digital feedback tools is not only beneficial but necessary for improving the quality of feedback in academic settings.

Oral feedback is also valued for its effectiveness. The combination of technological written feedback and face-to-face consultations appears to offer the most beneficial feedback mechanism for students, as indicated by both interview and survey responses. Although the transition to new feedback technologies is gradual, there is a clear shift towards embracing innovative methods such as Google Docs, chat applications, PDF annotations, Skype, and screen casting. This suggests a broader acceptance and integration of these tools among educators.

Furthermore, the shift to online education during and post the pandemic has accelerated the adoption of these digital feedback methods. The necessity of remote teaching during the pandemic compelled many instructors to explore and implement a variety of digital tools to maintain effective communication and feedback with students. As a result, there has been a more

permanent integration of these technologies in educational practices, highlighting their importance in modern teaching.

The primary motivation for instructors' adoption of feedback technology lies in their familiarity with these tools. While the popularity and user-friendliness of these technologies from the students' perspective are considered, instructors' personal comfort and experience with the technologies remain paramount. Time efficiency also emerges as a critical factor influencing the choice of feedback method, interestingly, for both traditional and digital users alike. International FYC instructors, in particular, time savings as the key advantage of using paper and pen.

Conversely, instructors who utilize MS Word for feedback underscore the importance of feedback technology more significantly. Survey results indicate that with increased experience in teaching, instructors become more aware of the benefits of feedback technology, including the logistical convenience of not having to transport physical student papers. They also recognize the broader importance of technology use in language teaching.

Despite current moderate levels of feedback technology usage, its potential to revolutionize the instructional landscape is undeniable. As highlighted by numerous interviewees, feedback technology has transitioned from being a supplementary option to an indispensable tool in the educational toolkit. This shift underscores the evolving nature of pedagogical practices and the increasing reliance on technology to enhance the efficacy and efficiency of feedback mechanisms in writing instruction.

Pedagogical Implementation

This study yields significant pedagogical implications, particularly in the realm of feedback technology within First-Year Composition (FYC) programs. A paramount recommendation from this research is the need for systematic training for FYC instructors on the utilization of feedback technology. The emphasis should be on the depth rather than the breadth of training, suggesting that extensive sessions focusing on a singular feedback technology could be more beneficial than cursory introductions to multiple technologies. Following such targeted training, instructors are better positioned to incorporate these technologies into their teaching practices effectively.

Additionally, the importance of training students in the use of basic feedback technologies is underscored. Given the emphasis on reciprocal communication, it is crucial for students to become proficient in feedback technologies, such as Microsoft Office, to facilitate a two-way feedback process. Another critical insight from this research is the highlighted value of face-to-face interactions for feedback. This is particularly relevant at large public universities where personal conferences play a pivotal role in the FYC curriculum, enabling students to engage more actively with instructors' feedback.

To support the ongoing use and integration of feedback technologies, the study advocates for continuous professional development and regular mentoring for educators. This approach ensures that teachers remain at the forefront of technological advancements in feedback methods, enhancing their pedagogical effectiveness.

Limitations

The study faces several limitations that warrant mention. The small sample size and the narrow age range of participants, predominantly in their 20s and 30s, restrict the generalizability of the findings and hinder the identification of broader trends. Although the focus of this study is on written feedback technology, future research should also explore the dynamics of oral feedback technology to encompass a wider range of feedback mechanisms.

The involvement of student participants alongside teachers in future studies could offer comparative insights into the efficacy and reception of feedback technologies from both perspectives. Moreover, while the survey design was time-consuming, the incorporation of requests for instructors to provide samples of their feedback might have enriched the data collection process, allowing for a more nuanced understanding of feedback practices.

Some participants expressed confusion over the term "feedback technology," though it was chosen to inclusively describe both traditional (e.g., paper and pen) and digital feedback methods. This terminology was deemed appropriate to encapsulate the full spectrum of feedback tools, notwithstanding the potential for misunderstanding. Future studies might benefit from clearer definitions or broader explanations to mitigate such confusions.

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References

Biber, D., Nekrasova, T., & Horn, B. (2011). The Effectiveness of Feedback for L1-English and L2-Writing Development: A Meta-Analysis. *TOEFL iBTTM Research Report. TOEFL iBT–14.* Northern Arizona University.

Bitchner, J., Young, S.,& Cameron, D.(2005). The Effect of Different Types of Corrective Feedback on ESL Student Writing. *Journal of Second Language Writing. 14*, 191-205

Burston, J. (2001). Computer-mediated feedback in composition correction. *CALICO Journal*, 37-50.

Cohen, A. D. (1987). Studying learner strategies: Feedback on compositions. *PASAA, 17*(2), 29-38.

Danisheh, S (2011). SMS Texting and Its Potential Impacts on Students' Written Communication Skills. *International Journal of English Linguistics*,1(2), 222-229.

Deeley, S. (2017). Using technology to facilitate effective assessment for learning and feedback in higher education. *Assessment & Evaluation in Higher Education*, 43(3), 439-448. https://doi.org/10.1080/02602938.2017.1356906

Diab, R. L. (2006). *Error Correction and Feedback in the EFL Writing Classroom: Comparing Instructor and Student Preferences.* In English Teaching Forum (Vol. 44, No. 3, pp. 2-13). US Department of State. Bureau of Educational and Cultural Affairs, Office of English Language Programs, SA-5, 2200 C Street NW 4th Floor, Washington, DC 20037.

DiGiovanni, E., & Nagaswami, G. (2001). Online peer review: an alternative to face-to-face? *ELT journal*, 55(3), 263-272.

Ducate, L., & Arnold, N. (2012). Computer-mediated feedback: Effectiveness and student perceptions of screen-casting software versus the comment function. In G. Kessler, A. Oskoz & I. Elola (Eds.), *Technology across writing contexts and tasks* (pp. 31-56). San Marcos, TX: CALICO Publications.

Ferris, D. R. (1995). Student reactions to teacher response in multiple-draft composition classrooms. *TESOL quarterly*, *29*(1), 33-53.

Jensen, L. X., Bearman, M., & Boud, D. (2021). Understanding feedback in online learning–A critical review and metaphor analysis. *Computers & Education, 173*, 104271.

Lee, G., & Schallert, D. L. (2008). Constructing trust between teacher and students through feedback and revision cycles in an EFL writing classroom. *Written Communication*, 25(4), 506-537.

Levy, M. (2009). Technologies in use for second language learning. *The Modern Language Journal*, 93, 769-782.

Liu, J., & Sadler, R. W. (2003). The effect and affect of peer review in electronic versus traditional modes on L2 writing. *Journal of English for Academic Purposes, 2(3)*, 193-227.

Pardo, A., Jovanović, J., Dawson, S., Gašević, D., & Mirriahi, N. (2017). Using learning analytics to scale the provision of personalized feedback. *British Journal of Educational Technology*, 50(1), 128-138. https://doi.org/10.1111/bjet.12592

Park, K. (2014). Comparing Goals of L1 and L2 College Writers: A Survey Study of First-Year Composition Students. In *Symposium on Second Language Writing (November 2014)*, Tempe, AZ

Paulus, T. M. (1999). The effect of peer and teacher feedback on student writing. *Journal of second language writing*, 8(3), 265-289.

Reid, J (2011). "We Don't Twitter, We Facebook": An Alternative Pedagogical Space that Enables Critical Practices in Relation to Writing. *English Teaching: Practice and Critique*, 10(1), 58-80.

Sandí Delgado, J. C., & Mesén-Hidalgo, R. (2020). Analyzing experiences of using effective feedback in the ESL classroom through the use of digital technologies. In *International Conference on Education and New Developments (END 2020) (Zagreb, Croatia, 2020)*.

Scheeler, M. C. (2008). Generalizing effective teaching skills: The missing link in teacher preparation. *Journal of Behavioral Education*, 17(2), 145-159.

Seror, J. (2012). Show me! Enhanced feedback through screencasting technology. *TESL Canada Journal*, 30(1), 104-116.

Stahmer, A. C., Suhrheinrich, J., Reed, S., & Schreibman, L. (2012). What works for you? Using teacher feedback to inform adaptations of pivotal response training for classroom use. *Autism Research and Treatment*.

Teclehaimanot, B., Mentzer, G., & Hickman, T. (2011). A mixed methods comparison of teacher education faculty perceptions of the integration of technology into their courses and

student feedback on technology proficiency. *Journal of Technology and Teacher Education*, 19(1), 5-21.

Tuzi, F. (2004). The impact of e-feedback on the revisions of L2 writers in an academic writing course. *Computers and composition*, 21(2), 217-235.

Ware, P. D., & Warschauer, M. (2006). Electronic feedback and second language writing. *Feedback in second language writing: Contexts and issues*, 105-122.