

Instructor Feedback Practices in Undergraduate Writing at Scale

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Abstract: The current research study is the first phase in a multiphase research project aiming to improve instructor writing feedback through the creation of an artificial intelligence powered scoring and feedback system. This first study will investigate how instructors give writing feedback via a survey and interviews. Understanding the various ways feedback is delivered and perceived by students at scale will inform the design of an automated feedback system.

Introduction

Effective writing is a necessary tool for thinking, learning, and success in our society. A key outcome of an undergraduate education is the ability to be an effective writer (AAC&U, 2007; Thaiss & Porter, 2010). Despite this emphasis, writing remains an area of difficulty. Many students enter college with limited writing proficiency, a substantial number of students make minimal gains in writing during college, and many employers find that college graduates lack necessary writing skills (Arum & Roksa, 2011; Business Roundtable, 2017; National Center for Education Statistics, 2012). Understandably, instructors, employers, and policy-makers are intent on finding effective ways to support college students' ability to write in service of learning in their respective disciplines (Kiefer, Palmquist, Carbone, Cox, & Melzer, 2018). Feedback is a powerful tool for improving students' writing and learning, as it simultaneously indicates students' current strengths and weaknesses and provides guidance for improvement (Konold, Miller, & Konold, 2004; MacArthur, 2007). However, higher education instructors are often given little training or support in providing effective feedback, or in adjusting this feedback for writing to learn or writing in the discipline contexts (Lee, 2008). This lack of proper feedback can leave students at a disadvantage regarding writing improvement.

Significance

Instructors who teach at online universities can spend on average 43 to 63% of their time on grading and providing feedback on papers (Mandernach & Holbeck, 2016; Van de Vord & Pogue, 2012). This workload is a significant challenge and we aim to explore ways to reduce instructor time. The current research study is the first phase in a multiphase research project aiming to improve instructor feedback through the creation of an artificial intelligence powered scoring and feedback system around writing. Using artificial intelligence to augment and support instructor feedback could exponentially increase the accessibility, efficiency, and effectiveness of writing and content instruction. This first study will investigate how instructors give feedback around writing. Understanding the various ways feedback is delivered and perceived to be important at a wide scale will help us understand what should be prioritized for such an automated feedback system.

Methods

This work is in partnership with a large university that serves over 130,000 learners enrolled across the globe and supports learning through writing, no matter the discipline. This mixed-methods study will combine quantitative data from an instructor survey (approximately 500 instructors from a representative sample of instructors across course content areas) and qualitative data from instructor interviews. Specifically, the instructor survey will gather data on the landscape of writing feedback-giving practices. This will capture instructors' current practices, as well as their ideal practices. Coupled with national, scaffolded standards for writing feedback and best practices from the empirical literature, we will conduct a gap analysis on how we can augment and improve writing instruction. Specifically, the instructor survey will gather data on the following topics: (a) What writing skills do students struggle with, (b) What writing skills do instructors think they are good at supporting, (c) The frequency of providing feedback on writing skills (current state), (d) The importance of providing feedback on writing skills (ideal state), (e) The frequency of delivering particular feedback practices (current state), and (f) The importance of delivering particular feedback practices (ideal state). Qualitative interviews and think-alouds will then be

conducted with a subset of the instructors. Table 1 displays our model of writing skills (adopted from the AAC&U writing VALUE rubric to define writing skills; AAC&U, 2009). Feedback practices will be pulled from an exhaustive list of feedback characteristics we are gathering from the research literature. Examples include: praise, localization, directiveness, elaboration, and the like.

Table 1: Writing Skills Definition

Genre and Disciplinary Conventions	Chooses writing construction based on demonstrated attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, formatting, and stylistic choices.
Sources and Evidence	Skillfully arranges high-quality, credible, and relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.
Context of and Purpose for Writing	Synthesizes understanding of context, audience and purpose of the assigned task in order to compose all elements of the work.
Content	Assembles appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.
Control of Syntax and Mechanics	Composes graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.
Revision	Sufficiently makes revisions based on feedback from an instructor.

Implications

From the survey data, we will look at the gap between what feedback practices instructors value and the frequency with which they use certain feedback practices, and compare these to the national standards for effective writing instruction. We will conduct analyses among the set of feedback practices to identify personas of feedback practices within the sample. The interview results will further shed light on the motivations behind why instructors give different feedback.

This study is the first step in a multiphase research project aimed to create an artificial intelligence powered scoring and feedback system around writing. This first study will help us identify feedback practices that can be useful for improving writing skills and will inform the design of automated feedback and scoring capabilities in later phases of the project. These results will also be used to guide student interviews around feedback in an effort to further investigate how different feedback practices impact writing skills.

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