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Editorial: Emerging technologies and writing: pedagogy and research

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Editorial on the Research Topic

Emerging technologies and writing: pedagogy and research

All the natural and forced changes in recent years such as the rapid development of technological affordances, natural disasters, and global pandemics have prompted us to look into ways in which we can (better) integrate technology in our teaching environments and improve not only our digital teaching skills but also our research skills in line with the changes in pedagogy. In fact, the field of writing has long been benefitting from technology adoption and keeping up with the latest methods of investigation. However, the rapid advancements and significant changes make it necessary for us to continuously evaluate the current state of the field so that we, as writing teachers and researchers, can move forward in a pedagogically sound and theoretically meaningful way. This collection is a timely response to the dynamic nature of writing.

As a result of digitalization in writing in first, second or additional languages, new tasks that involve a range of modes and media have emerged such as digital multimodal composing and online discussion posts, new genres and literacies have developed, and innovative approaches have been adopted to teaching and researching writing (Lim and Polio, 2020; Candarli, 2022). Keystroke logging and eye tracking, for example, have become valuable tools to explore novel questions in writing research (Chukharev-Hudilainen et al., 2019; McKinley, 2022), but several questions remain unanswered in the literature regarding the extent to which the application of these particular tools can be useful. Multilingual writing practices are implemented more widely, but they remain unexplored in writing research (McKinley, 2022). Our collection addresses such novel issues, as multilingual source-based writing practices (Chau et al.), innovative methods, such as keystroke logging and eye-tracking (Speltz et al.) and the use of existing methods to address new questions, such as corpus-based analysis of the changes in writing literature reviews (Li et al.) and the application of a Bayesian Hypothesis Testing approach to examining revision behavior in L2 writing (Mazgutova and McCray).

Our collection consists of four original research articles, each addressing a different important topic in writing pedagogy and research. Chau et al. report on graduate-level students' source use in integrated writing tasks across three languages, i.e., L1 Dutch, L2 English, and L3 French, in relation to text quality and how their source use and text quality change over a period of 6 months. The authors found correlations between source use and text quality in both L1 and L3 writing; however, this correlation was not found in L2 writing.

The writers conclude that source use may not explain the text quality alone; therefore, they recommend the investigation of other variables, such as working memory and other writer-related characteristics in future research. The novelty of this study lies in the integration of the writers' L3 to explore source use in integrated writing tasks.

Combining keystroke logging and eye tracking, Speltz et al. investigate the effects of a system called ProWrite, which provides real-time feedback to writers, on 13 L1 English undergraduate writers studying in the United States. The authors used mixed methods in that they utilized ProWrite's biometric data, writing-process and writing-product measures as well as semi-structured interviews with the writers. The participants of the study found the ProWrite system and its real-time feedback useful. One of the most significant contributions of this study lies in its use of both concurrent keystroke logging and eye-tracking to provide individualized plans for writers. Similar systems like ProWrite can be developed to further research the revision processes of writers of different backgrounds.

Conducting a corpus analysis of literature reviews written by graduate students, Li et al. examine the changes in the linguistic features and citation patterns in students' literature reviews over five tasks during the course of an online academic writing tutorial series. Researchers observed noticeable increases in cohesion quality and frequency of academic vocabulary across tasks. However, no significant changes were observed in citation patterns while there was a steady increase in the use of reporting verbs, hedges, and boosters, demonstrating increased awareness of stance-making.

Arguing that the Bayesian Hypothesis Testing is advantageous in small-scale exploratory studies, Mazgutova and McCray examine the changes in revision behavior of undergraduate and postgraduate students over a one-month intensive English for Academic Purposes course using keystroke logging and Bayes Factors. Contrary to their expectations, students did not engage with revisions more in the final stages of the course than they did in the beginning stages. There were also no differences in the proportions of students' higher-level (i.e., content, balance) and

lower-level (i.e., language, typography) revisions. The researchers attribute their results to the short duration of the course, believing that changes in revision behavior may take longer.

Our collection contributes to writing research by showcasing research on novel questions and innovative methods. Each article offers important suggestions for further research and implications for teaching writing. We expect an increased interest in emerging technologies in writing research, with the release of artificial intelligence tools, such as ChatGPT. Hence, we hope that this collection will trigger further research on emerging technologies in writing research and pedagogy.

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Author contributions

DC, AS, and LP contributed equally. All authors contributed to the article and approved the submitted version.

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The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

- Candarli, D. (2022). Linguistic characteristics of online academic forum posts across subregisters, L1 backgrounds, and grades. *Lingua* 267, 103190. doi: 10.1016/j.lingua.2021.103190
- Chukharev-Hudilainen, E., Saricaoglu, A., Torrance, M., and Feng, H.-H. (2019). Combined deployable keystroke logging and eyetracking for investigating L2 writing fluency. *Stu Second Lang Acquisition* 41, 583–604. doi: 10.1017/S027226311900007X
- Lim, J., and Polio, C. (2020). Multimodal assignments in higher education: Implications for multimodal writing tasks for L2 writers. *J Second Lang Writing* 47, 100713. doi: 10.1016/j.jslw.2020.100713
- McKinley, J. (2022). An argument for globalized L2 writing methodological innovation. *J Second Lang Writing* 58, 100945. doi: 10.1016/j.jslw.2022.100945