Thematic Collection[1]

Leveraging ChatGPT in the Writing Classrooms: Theoretical and Practical Insights

Jessie S. Barrot

College of Education, Arts and Sciences, National University, Philippines

Abstract

This paper explores the transformative potential of integrating generative artificial intelligence (AI) technologies, particularly ChatGPT, into second language (L2) writing pedagogy. The paper begins by examining the evolution of L2 writing pedagogy and highlighting the strengths and limitations of each. It then discusses the integration of ChatGPT into eight stages of the writing process, such as preparation, modeling, planning, and collaborative writing, emphasizing the importance of ethical and responsible use of AI. Key challenges, including over-reliance on AI, ethical concerns, and privacy issues, are identified, with practical recommendations provided to address these concerns. Theoretical frameworks relevant to AI adoption are also discussed to offer insights into how L2 writing teachers and students might embrace AI tools. The paper concludes with research recommendations to ensure the effective and responsible integration of generative AI into L2 writing instruction.

Keywords: *Artificial Intelligence, ChatGPT, Generative AI, Teaching Writing, Second Language Writing*

Introduction

Second language (L2) writing pedagogy has undergone significant paradigm shifts over time, moving from a focus on the product approach to more dynamic methods such as the process, genre, and process genre approaches (Badger & White, 2000; Ferris & Hedgcock, 2023; Huang & Zhang, 2020). The product approach primarily emphasizes the final written product,

---

[1] This paper is part of a thematic collection (2024, 43) entitled: Artificial Intelligence and ChatGPT for Language Education: A Research Agenda.

* Corresponding author.

E-mail address: jessiebarrot@yahoo.com   https://doi.org/10.32038/ltrq.2024.43.03

assessing it based on criteria like vocabulary, grammar, and organization (Brown, 1994). In contrast, the process approach highlights the recursive nature of writing, encouraging continuous revision and feedback to improve the content before focusing on form (Nordin, 2017). However, critics argue that the process approach overlooks the contextual and social aspects of writing (Hyland, 2003; Yu et al., 2023). The genre approach emerged to address these limitations by treating writing as a social practice, emphasizing the importance of context, purpose, and audience (Cheng, 2021; Hyland, 2007). It enables learners to understand text structures and genre conventions, which can be applied to their own writing. However, it has been criticized for potentially undervaluing the writing process itself (Badger & White, 2000). Recognizing the strengths and weaknesses of these approaches, the process genre approach was developed as a synthesis that integrates aspects of product, process, and genre-based pedagogy (Badger & White, 2000; Huang & Zhang, 2020). This hybrid approach allows learners to study the relationship between the purpose and form of specific genres while engaging in recursive writing processes. It not only enhances learners' understanding of various genres but also sees writing as a social process, making it a public and interactive act (Matsuda, 2003; Rahimi & Zhang, 2022).

Despite these advancements, current L2 writing pedagogies still often fall short in integrating technological elements essential for developing 21st-century skills. While the process genre approach has made strides in blending the cognitive and social aspects of writing, it does not fully capitalize on the affordances of technology to facilitate deeper engagement, collaboration, and multimodal literacy. Contemporary digital tools, such as automated writing evaluation systems, digital storytelling platforms, and AI-driven writing assistants, offer unique opportunities to augment L2 writing instruction by providing immediate, individualized feedback and supporting iterative learning processes (Li & Li, 2022; Zhang et al., 2021). These technologies can bridge the gap between pedagogical theory and practice by allowing learners to experiment with language, receive real-time feedback, and adapt their writing strategies in response to diverse audiences and contexts. Therefore, to fully equip learners for the complexities of modern communication, L2 writing pedagogies must expand beyond the conventional frameworks to include a robust technological component that reflects the realities of contemporary discourse (Strobl et al., 2019; Zhang & Zou, 2022). This necessitates a reconceptualization of L2 writing instruction as an integrated, adaptive, and technologically mediated practice that prepares learners not just to participate in academic and professional communities, but to contribute meaningfully to a rapidly changing, interconnected world. To address this gap, a sociocognitive-transformative approach has been proposed (Barrot, 2015; Barrot, 2018).

With the recent emergence of generative artificial intelligence (AI) technologies such as ChatGPT, there is a growing need to explore how these tools can be effectively incorporated into the L2 writing process (Barrot, 2023; Bui & Barrot, 2024; Seo, 2024). However, to harness the full potential of generative AI in the writing process, L2 writing teachers need to develop thoughtful strategies that integrate these technologies into the current approach to writing. This involves not only using AI to enhance writing skills but also teaching students how to critically interact with AI-generated content (Lo et al., 2024). Reflecting on this topic, I realize there is a significant knowledge gap regarding the use of generative AI, especially ChatGPT, in enhancing the teaching and learning of writing skills, particularly within the sociocognitive-

transformative framework. Through my exploration, I have gained insights into how AI can be effectively leveraged in this context and offer new opportunities for both teachers and students. However, I also recognize that incorporating ChatGPT into writing instruction comes with its own set of challenges. Writing teachers need to be mindful of these potential challenges and have effective strategies prepared to address them.

As I probe deeper into this subject, I find it useful to consider various AI adoption theories that help explain how L2 writing teachers and students might embrace this technology. Understanding these theories has provided me with a more structured way of thinking about the integration of AI in the writing classroom. Looking ahead, I see the need for further research to build on the current research findings. By continuing to investigate these areas, we can better understand the role generative AI can play in L2 writing pedagogy and ensure its benefits are fully realized while minimizing potential drawbacks.

Integrating ChatGPT into the Writing Process

The sociocognitive-transformative approach involved eight stages, namely preparation, modeling, planning, collaborative writing, individual writing, revising, editing, and publishing (Barrot, 2018). From this framework, I have come to see how integrating ChatGPT into each of these stages could greatly enhance the learning experience. By providing personalized support and fostering critical thinking, ChatGPT can be a valuable tool. However, I have also realized the importance of promoting the ethical, efficient, and responsible use of AI throughout the writing process to ensure its benefits are maximized while avoiding potential pitfalls.

During the preparation stage, ChatGPT can be instrumental in generating discussion prompts and helping students reflect on key elements such as the main idea, purpose, and audience. It is crucial for students to use these AI-generated prompts as a starting point by supplementing them with their own thoughts to deepen their understanding. In the modeling stage (i.e., students analyze the content and structure of model essays), ChatGPT can offer explanations and additional examples that align with the model texts, which I see as a way to enhance students' grasp of various writing styles.

When it comes to planning, ChatGPT can be highly effective in simulated brainstorming sessions to help students expand or narrow down ideas and offer preliminary research suggestions. However, it is essential for students to critically evaluate the AI's input, verifying its accuracy through credible sources. In collaborative writing, ChatGPT's real-time feedback on grammar and structure is a valuable asset. Yet, I feel that students should be reminded to rely on their collective judgment and creativity, using AI as a guide rather than a crutch.

In individual writing, ChatGPT can continue to provide valuable insights, but I believe it is important for students to focus on developing their personal writing skills, using the tool as a complement to their own efforts. During the revision stage, ChatGPT can suggest alternative phrasings and reorganization, but students must be encouraged to maintain their unique voice and style to ensure AI suggestions do not override their personal expression and identity as writers.

The editing phase is another area where ChatGPT can be beneficial, as it offers quick grammar checks and style corrections. However, it is vital that students cross-check AI-generated corrections with established writing conventions and seek clarification when needed.

Finally, when it comes to publishing, using ChatGPT to craft engaging summaries or introductions can boost students' confidence and sense of authorship. Reflecting on the entire process, I see the value in encouraging students to use feedback from both ChatGPT and their peers to continuously improve their writing. This somehow fosters ethical practices and a deeper commitment to their development as writers.

Potential Implementation Challenges and Some Recommendations

Integrating ChatGPT into the sociocognitive-transformative approach to teaching writing presents several challenges, but I believe these can be managed with careful planning and thoughtful implementation. One potential concern is the risk of students relying too heavily on AI for generating content and feedback, which potentially undermines their ability to develop independent writing skills and critical thinking. To mitigate this, it is important for L2 writing teachers, myself included, to establish clear guidelines that position ChatGPT as a supplementary tool rather than a primary resource. Promoting independent thinking is key, so incorporating regular activities focused on brainstorming, peer review, and group discussions will help students retain their ability to write creatively and critically without over-relying on AI.

Ethical concerns and academic integrity are also significant considerations. There is a genuine risk of plagiarism if students start presenting AI-generated content as their own. To address this, it is crucial to implement lessons on ethical AI use by highlighting the importance of originality, proper citation, and understanding the ethical implications of using AI-generated material. Developing a code of conduct to outline acceptable practices can guide students, and employing plagiarism detection tools will further ensure academic honesty. Additionally, there is a need to encourage critical engagement with AI-generated content, as students might otherwise accept suggestions without questioning their accuracy or relevance. By guiding students to critically evaluate AI suggestions, compare them with their own ideas or peer feedback, and reflect on their choices, we can cultivate a more profound understanding of the writing process and the function of AI.

Privacy and data security issues are another critical area of concern. Using AI tools like ChatGPT involves risks related to the sharing of personal information. To safeguard student privacy, selecting AI tools that comply with data protection regulations and maintaining strict privacy standards is essential. L2 writing teachers should emphasize the importance of avoiding sharing personal or sensitive information with AI platforms and working with AI providers to ensure data privacy. Technical issues and varying levels of accessibility also present challenges, given that not all students have reliable internet access or high levels of technological literacy. Providing the necessary resources and training will be vital to ensure that all students can use ChatGPT effectively, along with having backup plans to handle any technical difficulties that might arise.

Another concern is the variability in the quality of AI-generated content, which sometimes may not be accurate or relevant. Addressing this involves training students to critically evaluate the content produced by ChatGPT, cross-checking information with reliable sources, and seeking clarification from peers or instructors when necessary. This approach helps students become more discerning users of AI technology. Finally, balancing the use of AI with human interaction is crucial to maintaining the social and collaborative elements of learning. While

ChatGPT can be a valuable tool, it should not replace traditional peer review sessions, group discussions, or direct teacher feedback. Ensuring a combination of AI-assisted and human-driven activities will create a learning environment that benefits from technology while preserving the vital aspects of interpersonal skills development and collaborative learning. By addressing these challenges, we can integrate ChatGPT into the sociocognitive-transformative approach in a balanced and ethical way as well as enhance the writing process and support effective language learning.

ChatGPT Adoption Theories in L2 Writing Research

Theories play a crucial role in conducting research as they provide frameworks and conceptual foundations to guide the entire research process, from designing the research to interpreting results (Varpio et al., 2020). Without a solid theoretical basis, research can lack direction and coherence. In the field of L2 writing, theories are particularly valuable because they help establish a clear and shared understanding of the various concepts involved and their interrelationships. They inform our choices about research design and data collection methods, which ensure that the study is well-structured and that the research questions are addressed effectively. Using theory also means situating the phenomenon being studied—such as the use of ChatGPT in L2 writing—within the broader context of existing knowledge. This approach helps us understand how our work fits into the larger academic conversation and how it contributes to ongoing discussions in the field. Theoretical frameworks offer a lens through which we can analyze and interpret data. Through this, we can make our findings more meaningful and grounded. Having a robust theoretical foundation ensures that our research is based on sound reasoning and established concepts. While we consider specific theories to explore the adoption of ChatGPT in L2 writing, we also recognize the value of remaining open to other theories and frameworks that could offer additional insights. This openness to multiple perspectives is crucial as we continue to explore the role of generative AI in L2 writing.

Activity Theory

Activity theory (AT) describes any human activity as a developmental process (Engeström, 2015). In the context of a ChatGPT-enhanced learning environment, AT argues that its success, failure, and complexities can be better understood when the interaction among tools (i.e., physical and psychological artefacts), subject (i.e., individuals or groups involved in the activity), and object (goal of the activity) are examined (Bannayan et al., 2014; Engeström, 2001; Kuutti, 1995). These three interrelated elements are mediated by rules (i.e., formal or informal regulations that guide the activity), community (social group of the subject), and division of labor (i.e., shared tasks within the community) (Engeström, 2015; Yamagata-Lynch, 2010). In studies on ChatGPT as a writing tool, teachers, students, or school leaders can be identified as the subject, instructional or learning goals can be the object, and ChatGPT as the tool. This theory proves useful in examining the interplay between classroom policies, peer interactions, and collaborative dynamics in shaping the navigation practices of teachers and students when employing ChatGPT as a writing tool. Empirical research, such as Kessler (2020), has utilized AT to explore graduate students' L2 writing strategies.

Social Cognitive Theory

Albert Bandura's social cognitive theory (SCT) highlights the reciprocal interaction among individuals, their behavior, and their social environment. Hence, it treats individuals not as passive recipients of environmental stimuli but as active participants who use their mental systems and sensory motors in viewing certain activities and achieving desired outcomes (Bandura, 1997). SCT argues that a person's past experience contributes to his/her behavior. This behavior is regulated through reinforcement and control to achieve and sustain the intended goal. Hence, self-efficacy is a paramount concept of SCT. Self-efficacy is the belief in one's capability to effectively accomplish tasks, attain goals, or overcome challenges (Schunk, 1984). Thus, this theory suggests how one's behavior is shaped by self-efficacy and outcome expectations. One way to draw from this theory when adopting ChatGPT for writing purposes is by examining learner control, self-regulation, self-efficacy, and observational learning. Studies like Mujtaba et al. (2023) have adopted SCT in investigating the effects of combining form-focused instruction and sociocognitive-transformative approach on L2 learners' complexity, accuracy, and fluency in writing.

Innovation Diffusion Theory

Innovation diffusion theory (IDT) is a social science theory that explains how innovations and technologies are adopted and imparted in a given social system (Rogers, 2003). Innovation refers to any new ideas, practice, technology, or products by an individual or a group. This theory aims to shed light on innovation using the four elements of diffusion, namely social systems, time, communication channels, and innovation. IDT further explains that one's adoption of innovation is influenced by its relative advantage, observability, complexity, and triability. Based on these factors, Rogers (2003) has identified five categories of adopters: laggards, late majority, early majority, early adopters, and innovators. This theory is most appropriate when investigating how ChatGPT adoption is communicated, accepted, and integrated into society or a specific community (e.g., classroom or institution). It is also useful when identifying adoption patterns and decision-making processes, communication channels, and implementation experiences. One study that applied IDT is Grgurović's (2014) examination of the adoption of a learning management system (LMS) in the context of blended language learning.

Theory of Planned Behavior

Another major theory that can be used as a framework for conducting research on the utilization of ChatGPT as a research writing tool is the theory of planned behavior (TPB). This theory suggests that behavioral intention (e.g., adoption of ChatGPT) is influenced by multidimensional constructs, namely individuals' attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). Attitude is about an individual's degree of favor toward the use of technology and covers perceived usefulness, perceived ease of use, and compatibility. Subjective norm refers to the influence of social factors on individual's behavior. It includes the social pressure coming from classmates, friends and colleagues, family, and cultural norms. Finally, perceived behavioral control pertains to an individual's perception of how easy or difficult it is to carry out a specific action. Researchers can draw from TPB when investigating

teachers' and students' attitude and perception toward ChatGPT as an assistive writing tool, their intention to use the AI tool, and how social norms influence their adoption. Empirical applications, such as the study by Karaca and Uysal (2021), have employed TPB in developing and validating an inventory of English writing teacher beliefs.

Technology Acceptance Model

Technology acceptance model (TAM) is a widely used framework in technology research. This theory explains and predicts the determinants of an individual's acceptance or usage of new technologies. Davis (1989) initially proposed TAM, and it has been refined and updated by various scholars (Granić & Marangunić, 2019; Marangunić & Granić, 2015). TAM consists of two core components, namely perceived usefulness (PU) and perceived ease of use (PEOU). PU represents the belief that technology will improve performance or increase efficiency, whereas PEOU reflects the perception that technology is easy to use and involves minimal effort. TAM argues that these two components shape one's attitude toward adopting a particular technology and usage behavior. Hence, TAM would be useful when identifying the factors that influence ChatGPT acceptance and designing and promoting technologies that are more likely to be accepted and adopted by target users. Empirical research by Zou and Huang (2023) has employed the TAM framework in examining students' acceptance of ChatGPT in writing.

Enhanced Technology Acceptance Model

Venkatesh and Davis (2000) expanded the original TAM by interpreting PU and usage intentions through social influence factors (such as subjective norm, voluntariness, and image) as well as cognitive instrumental processes (including job relevance, output quality, result demonstrability, and perceived ease of use). They label it as an enhanced technology acceptance model (TAM2). Image refers to user's perception of social image or how one wants to be seen, whereas voluntariness is the degree to which one perceives acceptance of technology as non-mandatory. Meanwhile, result demonstrability relates to the tangibility of the results emanating from the use of technology. The inclusion of other relevant factors provides a more nuanced framework for investigating the complexity of technology acceptance and usage. TAM2 best fits studies that seek to gain an in-depth understanding of users' perceptions, social influences, and cognitive processes that mediate the relationship between external variables and ChatGPT acceptance as a writing tool. Empirical studies, such as those by Li (2014), have used TAM2 to explore the practices with the educational technology of a language teacher from China.

Future Research Directions

Integrating generative AI technologies like ChatGPT into L2 writing pedagogy has made me realize the vast potential for future research that could significantly advance language learning and teaching practices. I see the need for longitudinal studies to understand the long-term impacts of ChatGPT on L2 writing development. These studies could explore how ongoing interaction with AI tools influences learners' writing proficiency, critical thinking, and creativity over time. I believe that understanding these cumulative effects will provide valuable

insights into how the skills acquired with AI support can be sustained and applied in different academic and real-world contexts.

Comparative studies also seem crucial to me, as they can examine the effectiveness of different pedagogical approaches that incorporate ChatGPT. Exploring how various models, like the sociocognitive-transformative approach and the process genre approach, interact with AI tools could offer a deeper understanding of their impact on student engagement, learning outcomes, and motivation. By comparing these approaches, we can identify best practices that maximize the benefits of AI while minimizing potential drawbacks, such as over-reliance on technology or a decrease in human interaction.

I have also recognized the importance of investigating the ethical and psychological implications of AI integration in L2 writing settings. Research in this area should look into how using AI tools like ChatGPT affects students' views on authorship, originality, and academic integrity. Exploring how students balance AI-generated content with their own work, while assessing possible psychological effects such as dependency or diminished self-efficacy, can inform the creation of ethical guidelines and policies for responsible AI utilization.

Accessibility and inclusivity are other areas that deserve attention. Research should focus on how different learner populations—those with varying levels of technological literacy, disabilities, and diverse linguistic and cultural backgrounds—engage with AI tools. This would help inform the design of AI interfaces and teaching practices that are adaptable and inclusive to ensure equitable access to the benefits of AI in language learning for all students.

Lastly, I see a strong need to explore the role of teacher training and professional development in effectively implementing AI tools in L2 writing pedagogy. Understanding how teachers perceive AI integration, the challenges they face, and the support they require is essential. Research could examine how professional development programs impact teachers' competence and confidence in using AI tools, as well as their ability to guide students in ethical and effective AI use. By addressing these research areas, we can gain a more comprehensive understanding of generative AI's role in enhancing L2 writing education. This awareness can pave the way for more informed and effective L2 writing practices and policies.

Conclusion

The integration of generative AI technologies like ChatGPT into L2 writing pedagogy represents a transformative shift that can significantly enhance educational practices. By leveraging AI within a sociocognitive-transformative framework, L2 writing teachers can provide personalized support, foster critical thinking, and prepare students for the evolving demands of the 21st century. However, this integration must be approached with careful consideration of ethical, practical, and pedagogical challenges to ensure that AI is used responsibly and effectively. Developing clear guidelines, fostering critical engagement with AI-generated content, and maintaining a balance between AI assistance and human interaction are crucial to maximizing the educational benefits of ChatGPT. As L2 writing teachers and researchers continue to explore the potential of generative AI, it is essential to conduct rigorous research that examines the long-term impacts, ethical considerations, and inclusivity of these technologies. Such efforts will contribute to the development of best practices that not only enhance L2 writing pedagogy but also empower students to become discerning, innovative, and responsible writers in an increasingly digital world.

Jessie S. Barrot

ORCID

iD https://orcid.org/0000-0001-8517-4058

Ethics Declarations

Competing Interests

No, there are no conflicting interests.

Rights and Permissions

Open Access

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Badger, R., & G. White. (2000). A process genre approach to teaching writing. *ELT Journal, 54*(2), 153–60. https://doi.org/10.1093/elt/54.2.153

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Bannayan, H. E., Kalaš, I., Conery, L., Laval, E., Laurillard, D., Lim, C. P., et al. (2014). ICT in primary education. *UNESCO Institute for Information Technologies in Education* (Vol. 3). Retrieved from iite.unesco.org/pics/publications/en/files/3214707.pdf

Barrot, J. S. (2015). A sociocognitive-transformative instructional materials design model for second language (L2) pedagogy in the Asia Pacific: Development and validation. *The Asia-Pacific Education Researcher*, *24*, 283–297. https://doi.org/10.1007/s40299-014-0179-0

Barrot, J. S. (2018). Using the sociocognitive-transformative approach in writing classrooms: Effects on L2 learners' writing performance. *Reading & Writing Quarterly*, *34*(2), 187–201. https://doi.org/10.1080/10573569.2017.1387631

Barrot, J. S. (2023). Using ChatGPT for second language writing: Pitfalls and potentials. *Assessing Writing*, *57*, 100745. https://doi.org/10.1016/j.asw.2023.100745

Brown, H. D. (1994). *Teaching by principles: An interactive approach to language pedagogy*. Prentice Hall.

Bui, N. M., & Barrot, J. S. (2024). ChatGPT as an automated essay scoring tool in the writing classrooms: How it compares with human scoring. *Education and Information Technologies*. Advance online publication. https://doi.org/10.1007/s10639-024-12891-w

Cheng, A. (2021). The place of language in the theoretical tenets, textbooks, and classroom practices in the ESP genre-based approach to teaching writing. *English for Specific Purposes*, *64*, 26–36. https://doi.org/10.1016/j.esp.2021.07.001

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

Engestrom, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*, *14*(1), 133–156. https://doi.org/10.1080/13639080020028747

Engeström, Y. (2015). *Learning by expanding*: *An activity-theoretical approach to developmental research* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/cbo9781139814744

Ferris, D. R., & Hedgcock, J. S. (2023). *Teaching L2 composition: Purpose, process, and practice* (4th ed.). Routledge.

Granić, A., & Marangunić, N. (2019). Technology acceptance model in educational context: A systematic literature review. *British Journal of Educational Technology*, *50*(5), 2572–2593. https://doi.org/10.1111/bjet.12864

Grgurović, M. (2014). An application of the Diffusion of Innovations theory to the investigation of blended language learning. *Innovation in Language Learning and Teaching*, *8*(2), 155–170. https://doi.org/10.1080/17501229.2013.789031

Huang, Y., & Zhang, L. (2020). Does a process-genre approach help improve students' argumentative writing in English as a foreign language? Findings from an intervention study. *Reading & Writing Quarterly*, *36*(4), 339–364. https://doi.org/10.1080/10573569.2019.1649223

Hyland, K. (2003). Genre-based pedagogies: A social response to process. *Journal of Second Language Writing*, *12*(1), 17–29. https://doi.org/10.1016/S1060-3743(02)00124-8

Hyland, K. (2007). Genre pedagogy: Language, literacy and L2 writing instruction. *Journal of Second Language Writing*, *16*(3), 148–164. https://doi.org/10.1016/S1060-3743(02)00124-8

Karaca, M., & Uysal, H. H. (2021). The development and validation of an inventory on English writing teacher beliefs. *Assessing Writing*, *47*, 100507. https://doi.org/10.1016/j.asw.2020.100507

Kessler, M. (2020). Technology-mediated writing: Exploring incoming graduate students' L2 writing strategies with Activity Theory. *Computers and Composition*, *55*, 102542. https://doi.org/10.1016/j.compcom.2020.102542

Kuutti, K. (1995). Activity theory as a potential framework for human computer interaction research. In B. Nardi (Ed.), *Context and consciousness: Activity theory and human computer interaction* (pp. 17–44). MIT Press. https://doi.org/10.7551/mitpress/2137.003.0006

Li, J., & Li, M. (2022). Assessing L2 writing in the digital age: Opportunities and challenges. *Journal of Second Language Writing*, *57*, 100913. https://doi.org/10.1016/j.jslw.2022.100913

Lo, C. K., Hew, K. F., & Jong, M. S. Y. (2024). The influence of ChatGPT on student engagement: A systematic review and future research agenda. *Computers & Education*, *219*, 105100. https://doi.org/10.1016/j.compedu.2024.105100

Marangunić, N., & Granić, A. (2015). Technology acceptance model: A literature review from 1986 to 2013. *Universal Access in the Information Society*, *14*, 81–95. https://doi.org/10.1007/s10209-014-0348-1

Matsuda, P. (2003). Process and post-process: A discursive history. *Journal of Second Language Writing, 12*(1), 65–83. https://doi.org/10.1016/S1060-3743(02)00127-3

Mujtaba, S. M., Barrot, J. S., Parkash, R., & Nawaz, M. W. (2023). Combining sociocognitive-transformative approach and form-focused instruction: Effects on L2 learners' complexity, accuracy and fluency in writing. *3L: Southeast Asian Journal of English Language Studies*, *29*(3), 180–194. http://doi.org/10.17576/3L-2023-2903-13

Nordin, S. M. (2017). The best of two approaches: Process/genre-based approach to teaching writing. *The English Teacher*, *35*, 75–85. https://www.melta.org.my/journals/TET/downloads/tet35_01_06.pdf

Rahimi, M., & Zhang, L. J. (2022). Effects of an engaging process-genre approach on student engagement and writing achievements. *Reading & Writing Quarterly*, *38*(5), 487–503. https://doi.org/10.1080/10573569.2021.1982431

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Schunk, D. H. (1984). Self-efficacy perspective on achievement behavior. *Educational Psychologist*, *19*(1), 48–58. https://doi.org/10.1080/00461528409529281

Seo, J-Y (2024). Exploring the educational potential of ChatGPT: AI-assisted narrative writing for EFL college students. *Language Teaching Research Quarterly*, *43*, 1–21. https://doi.org/10.32038/ltrq.2024.43.01

Strobl, C., Ailhaud, E., Benetos, K., Devitt, A., Kruse, O., Proske, A., & Rapp, C. (2019). Digital support for academic writing: A review of technologies and pedagogies. *Computers & Education*, *131*, 33–48. https://doi.org/10.1016/j.compedu.2018.12.005

Varpio, L., Paradis, E., Uijtdehaage, S., & Young, M. (2020). The distinctions between theory, theoretical framework, and conceptual framework. *Academic Medicine*, *95*(7), 989–994. https://doi.org/10.1097/ACM.0000000000003075

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, *46*(2), 186–204. https://doi.org/10.1287/mnsc.46.2.186.11926

Yamagata-Lynch, L. C. (2010). *Activity systems analysis method: Understanding complex learning environments.* Springer. https://doi.org/10.1007/978-1-4419-6321-5

Yu, S., Jiang, L., & Zhou, N. (2023). The impact of L2 writing instructional approaches on student writing motivation and engagement. *Language Teaching Research*, *27*(4), 958–973. https://doi.org/10.1177/1362168820957024

Zhang, M., Gibbons, J., & Li, M. (2021). Computer-mediated collaborative writing in L2 classrooms: A systematic review. *Journal of Second Language Writing*, *54*, 100854. https://doi.org/10.1016/j.jslw.2021.100854

Jessie S. Barrot

Zhang, R., & Zou, D. (2022). Types, features, and effectiveness of technologies in collaborative writing for second language learning. *Computer Assisted Language Learning*, *35*(9), 2391–2422. https://doi.org/10.1080/09588221.2021.1880441

Zou, M., & Huang, L. (2023). To use or not to use? Understanding doctoral students' acceptance of ChatGPT in writing through technology acceptance model. *Frontiers in Psychology*, *14*, 1259531. https://doi.org/10.3389/fpsyg.2023.1259531