J-NOSS
JOURNAL OF THE NATIONAL ORGANIZATION FOR STUDENT SUCCESS

Volume 3, Issue 1 Spring 2026

Generative AI in Corequisite English Labs: Impacts on Multilingual Student Writing Confidence and Outcomes

Lauren Anderson
National Louis University

Eric VanDemark
National Louis University

Abstract

This mixed-methods study investigates the impact of an AI-integrated curriculum on multilingual student writers enrolled in corequisite English support courses at a broad-access, Hispanic-Serving Institution (HSI). Prompted by the rapid rise of generative AI tools and widespread concern in higher education, this research examines whether structured engagement with AI enhances students' written communication outcomes and their self-perception as effective writers. Through student surveys, writing artifacts, interviews, and rubric-aligned assessment scores, the study explores how AI can support multilingual students' confidence, linguistic efficacy, and rhetorical adaptability. While quantitative findings did not show a statistically significant impact on assessment scores, qualitative data reveal richer outcomes: increased student agency, critical engagement with AI ethics, and greater comfort navigating academic discourse. The study concludes that AI, when implemented with attention to equity and critical awareness, offers promising support for linguistically diverse students navigating institutional barriers in writing education.

Keywords: generative AI, artificial intelligence in education, multilingual student writers, higher education pedagogy, writing process support

Recommended Citation

Anderson, L., & VanDemark, E. (2026). Generative AI in corequisite English labs: Impacts on multilingual student writing confidence and outcomes. *Journal of the National Organization for Student Success*, *3*(1), 1-20. https://doi.org/10.61617/jnoss.62

In early 2023, as generative artificial intelligence (AI) tools were causing confusion and consternation among our fellow writing faculty, we were confronted with some urgent concerns: Would AI undermine the development of students' writing skills? Would it erode academic honesty? Could it be meaningfully integrated into curricula without compromising the educational values of authenticity, process, and growth?

These questions felt especially pressing at our institution—a private, not-for-profit, four-year Hispanic-Serving Institution (HSI) with a broad-access undergraduate college. Our college serves a large population of first-generation and multilingual students, and a primary focus of the college is to provide equity of access to higher education for these students. Within this context, our Developmental Education program provides corequisite support courses for first-year students enrolled in writing-intensive courses. Programmatically, we support students as they develop their communication efficacy, build confidence and agency in their writing process, and engage with linguistic justice and critical language analysis.

As educators supporting student writing development, we recognized both the risks and possibilities that AI posed in our classrooms. Rather than banning these tools outright or embracing them uncritically, we posed a new set of questions: What happens when student writers are given structured, reflective opportunities to engage with AI? Can such engagement enhance their confidence and rhetorical efficacy in the writing process? Might AI, in the right conditions, support rather than replace the complex work of learning to write?

This mixed-methods study emerged from these inquiries. Drawing on student surveys, writing artifacts, interviews, and rubric-aligned assessment scores, we examined the impact of an AI-integrated curriculum on students in our corequisite English support courses, with a particular focus on the effects on writing assessment outcomes and student self-reports of having an effective writing process. While our quantitative data did not show significant gains in writing outcomes for the sections with AI integration, our qualitative findings revealed substantial developments: increased student agency, deeper critical thinking about AI ethics, and greater confidence navigating academic discourse. Our research suggests that when generative AI is implemented with intentionality, equity, and critical awareness, it can serve as a powerful pedagogical ally—particularly for linguistically diverse students who are too often underserved by traditional models of writing instruction.

Literature Review

While the effects of AI tools on education will certainly be far-ranging, one notable development we can already see is that generative AI tools are poised to significantly influence writing composition and language education, particularly in the college classroom. Digital literacy is a key tool for future success, and "given contingent/shifting job demands, student writers need to learn not simply how to write specific texts and genres, but more significantly how to continually learn to write across this ever-changing constellation of technologies, modalities, and contexts" (Leu et al., 2016, p. 42). This points to the need to understand how students can use the newest technologies—such as AI large language model tools—to enhance their writing capabilities. It is also worth considering what research has shown about the effect of a few earlier technological developments on writing.

College Writing in our Context

In our Developmental Education program, which is grounded in a strengths-based approach, we aim to recognize and support the diverse linguistic and cultural resources students bring to their writing. We understand that students often face institutional and linguistic barriers that obscure the unwritten rules of academic discourse. This challenge has led us to explore how AI tools might help bridge these gaps—not by replacing students' voices, but by offering individualized support that fosters their confidence and efficacy as writers. Our interest lies in using AI in a way that does not reinforce dominant academic standards, but instead aims to help students navigate them critically, while affirming the value of their existing knowledge and modes of expression.

In academic writing, students must learn the communication expectations of a scholarly community. The discourse and linguistic norms are not always taught directly, "despite the fact that research has demonstrated that there is a persistent gap between staff and student expectations and standards in this domain" (Van de Poel & Gasiorek, 2012). Van de Poel and Gasiorek (2012) have found that focusing on efficacy–t he ability to communicate effectively with the intended audience for a specific purpose–benefits students' self-perceptions as writers. The knowledge and skills gained through these experiences improve students' feelings of writing confidence. In seeking to support students' communication efficacy and confidence in the writing process, AI tools may provide individualized feedback and guidance to demystify the communications expectations and build confidence and efficacy.

The expectations of academic writing can be disproportionately burdensome on culturally and linguistically diverse students. Universities form part of an educational system in the U.S. that prioritizes upper and middle-class knowledge, and they tend to posit the knowledge of people from lower economic backgrounds as "lacking" and "disadvantaged" (Yosso, 2005). Flores and Rosa (2015) describe schools as part of the structures in society that determine who decides what is "appropriate." Students from minoritized communities are often not considered "appropriate" even when they conform to the norms of the linguistic standard. Their writing is still often othered and silenced in classrooms. Researchers Tatum and Gue (2012) explain that some culturally and linguistically diverse students have their self-perception as writers negatively affected by these deficit-oriented narratives in schools. Learning to write in an additional language can be a subtractive experience for students when they are forced to use only the target language, are not given the opportunity to develop writing skills in their native language, and are not equipped with the confidence to join the dominant language discourse communities (Valenzuela, 2005). In considering this research, we wondered if AI can help students adapt their language to academic expectations while at the same time valuing diverse styles of communication.

Writing Meets AI

In our context, we are always looking for tools that will support students for the optimal development of communication skills. Writing success depends on rhetorical awareness, genre knowledge, and subject fluency—areas in which students from marginalized backgrounds may receive uneven support. Corpus Linguistics approaches offer authentic language input for students (Klimova, 2014; Yoon, 2008), and AI-powered tools go further by offering real-time, contextual feedback and pattern recognition. While research shows digital tools can help younger

students overcome feelings of being "struggling writers" (Zoch et al. 2016), there remains a need to explore how these benefits translate to higher education, especially for students facing institutional, cultural, or linguistic barriers.

Sociocultural theories of writing frame writing as a socially situated act, mediated by historically shaped tools and practices (Prior, 2006). When thoughtfully integrated, AI can act as such a tool—collaborating with students, offering immediate feedback, and modeling discourse conventions. However, equitable integration requires giving students agency in using these tools. Brossi et al. (2022) argue for involving students in AI-related decisions, recognizing the ethical stakes of AI in education. Furthermore, as Kohnke et al. (2023) highlight, AI can support essential skills like adaptability, effective communication, and language development through applications such as text adaptation and vocabulary assistance.

Perceptions of AI in Education

In seeking to understand how students might best use AI large language model tools to enhance their writing capabilities, a starting point is to understand how these tools are perceived. Multiple studies (e.g., Hostetter et al., 2024; Yan, 2023) highlight a general acceptance of AI tools for support tasks like spelling and grammar, while expressing concern over using these tools for full content generation due to ethical and equity issues. Across international contexts—from Hong Kong (Chan & Hu, 2023) to India (Karaikudi et al., 2023)—students generally viewed AI tools positively, but they voiced concerns around accuracy, privacy, and the loss of personal interaction. Broadly, across a range of studies and articles, the themes of ethics, privacy, and academic integrity emerge as significant concerns, paralleling the discourse in popular media. While there seems to be some consensus on the areas of concern around AI tools, there is still work to be done in unpacking the complexity of these concerns. For example, Jeffrey (2020) found that greater familiarity with AI often led to more ambivalent attitudes, suggesting a more nuanced understanding of perceptions. Greater insight into the underlying complexities of attitudes towards AI tools could, in turn, have significant implications for ongoing research into the application of these tools in the writing classroom as well as the development of ethical-use frameworks.

Potential Benefits of (and Concerns about) AI Tools in Education

Technology in the writing classroom has been considered an important part of a students' communicative abilities. Saljo (2010) and Wagner (2010) assert that digital tools are not merely aids for learning but transformative forces that require students to develop adaptability and critical thinking in a fast-changing world. When considering the impacts of new AI-technologies, it may be useful to consider previous technological impacts on the college composition classroom. When computers became commonly used as a writing tool, students were more engaged and motivated to write on computers, and they tended to produce more writing and of higher quality (Goldberg et al., 2003). In another example, the expanded audiences that became accessible via digital tools have also helped students develop their identities as writers, as shown by the use of open source software and social media in the classroom (Warschauer et al., 2010).

More recent research into other digital tools has shown similar trends. For example, students think that AI tools like Grammarly (an editing tool) are easy to use and improve their

writing and understanding of grammar rules (Cavaleri & Dianati, 2016). Using Grammarly has been positively correlated with student confidence in writing (Bailey et al., 2025), and students believe AI tools make them more skilled writers (Ya'u & Mohammed, 2025). It is not unreasonable to expect that the development of generative AI tools will be equally—if not more—impactful. In fact, researchers have shown that the use of AI tools is more effective than their non-AI counterparts for language learners to check their grammar (Schmidt-Fajlik, 2023). UNESCO's Beijing Consensus (2019) positions AI as a catalyst for inclusive, personalized, and lifelong learning, especially for students with disabilities or those navigating language barriers. However, more inquiry is needed into how these technologies can lift some of the additional burdens placed on students in academic writing.

The rise of AI in writing instruction presents both promise and risk. ChatGPT, for example, can act as a research assistant, encouraging critical engagement with texts (Pack & Maloney, 2023). A concern remains about access to these tools—and the ability to use them effectively—and whether this will be equally distributed among all students. Phillips and Manderino (2015) emphasize that digital literacy initiatives must be accompanied by teacher training and expanded access to technology to avoid deepening existing educational divides. Without deliberate attention to equity, AI may reinforce the very inequalities it has the potential to reduce. Bailey et al. (2025) found that students using the paid version of Grammarly reported more benefits, which points to the potential for lack of access to create different experiences.

For multilingual learners and students unfamiliar with the conventions of academic discourse, AI tools may serve as powerful mediators. Academic writing often privileges voices and structures opaque to newcomers (Martinez et al., 2008). AI tools can help students adapt their writing for specific audiences, purposes, and genres, providing them access to the "off-stage" knowledge often taken for granted in academic spaces. Small studies have found that multilingual students find AI tools useful for translation and writing efficiency (Nugroho et al., 2025). In this way, AI may democratize access to the norms of scholarly communication.

Recent studies have highlighted the potential of AI tools to expand students' critical thinking capabilities (Zafar et al., 2025), pointing out the importance of students' ability to evaluate the output and avoid overreliance. They also described the potential benefits of personalized feedback and learning support. Bai and Wang (2025) surveyed students and concluded that AI best functions as a collaborative partner, with high-quality interactions leading to students reports of motivation, creativity, and self-efficacy. As a writing tool, Black and Tomlinson (2025) demonstrated that students use AI for tasks like proofreading and editing, and they use AI as a tool for complex thinking tasks like understanding concepts and generating ideas. Students like the efficiency but are skeptical and interested in preserving their "intellectual independence" (Black and Tomlinson, 2025, p. 1). Huang and Mizumoto (2024) point to the importance of guiding students through the use of AI in order to use these tools to support learning, especially in a second language context. Zhou and Peng (2025) similarly conclude that AI tools can increase students' creativity by enhancing engagement. However, this effect is moderated by the teacher's AI literacy–teachers with less AI knowledge afford students fewer opportunities for AI creativity.

Ultimately, the promise of AI in education must be measured against its potential to widen or narrow existing equity gaps. How students use these tools—and how institutions support or limit access—will shape academic outcomes and students' confidence, identity, and

ability to participate in discourse communities. The central question remains: how can AI be leveraged to make academic writing more accessible, not just more efficient, for all students?

These studies collectively underscore the evolving landscape of AI in education, emphasizing its potential benefits and challenges, ethical considerations, and the need for continued research to ensure responsible and equitable AI implementation while maintaining the human element in learning.

Purpose

This research seeks to understand if a curriculum that gives students, particularly multilingual students, the opportunity to explore practical uses and ethical implications of AI tools will positively impact scores on assessments that include a Written Communication evaluation. Additionally, we seek to understand if this AI-infused curriculum impacts students' self-reports of having an effective writing/creation process.

Research Questions

This mixed-methods research project sought to investigate the following questions:

- What is the correlation between participation in an AI curriculum in a Corequisite English Lab and Written Communication rubric scores in students' associated English courses?
- To what extent do students report using AI in their writing and creation process?
- How are the students who are using generative AI tools incorporating them as a part of an effective writing and creation process?

Methodology

For this project, we used a research design that allowed for an iterative, collaborative approach. Hearing from students through surveys, conversations, and interviews allowed us to capture student voices directly. Examining artifacts generated during activities gave us another way to analyze students' ideas and experiences in an unobtrusive method. We began with a survey of students, including quantitative (scaled-score) and qualitative (open-ended) questions. The initial survey influenced the plan for conversations and activities. As we implemented AI-focused conversations and activities, we gathered artifacts from the activities and recorded student ideas from discussions. At the middle and end points of the term, we conducted a reflection survey that mirrored the initial survey to look for changes in students' responses. We conducted in-depth interviews with interested students to learn more about their experiences and opinions. We analyzed rubric scores on students' final projects for their English course to see if participation in the research impacted student outcomes in courses that emphasize writing.

Participants

The participants were drawn from students in undergraduate college daytime classes. Students were typically 18-19 years old, and followed the following demographic patterns:

- About two-thirds Pell-eligible
- More than half first-generation college goers
- More than 50% Hispanic and about 20% African American

The participants in the study were students enrolled in sections of two first-year corequisite labs taken concurrently with General Education English classes, and attending at least 70% of class sessions during a ten-week term. The participants were in five separate lab sections with four separate instructors. Of the students who consented to participate in the research and met the criteria for filling out multiple surveys, there were 52 students in corequisite labs with the AI curriculum and 150 in corequisite labs without the AI curriculum. Eighty percent of students in the study reported being multilingual.

The research study was reviewed and approved by the university's Institutional Review Board prior to implementation. All students in both experimental and control groups were formally asked for their permission to be included in the research study during the first day of class as instructors read a script and administered an in-class survey. Students in the experimental group were also asked for permission to share examples of coursework generated during class sessions.

Data Sources

This study utilized mixed quantitative and qualitative methods to collect data, including student survey responses (at start-of-term and end-of-term), work product generated during the term, scores from student writing assignments, and semi-structured follow-up interviews with select participants, which were be analyzed for themes. The types of information gathered are summarized as follows:

Assessment Scores:

- Collected after the end of the Winter term
- Beginning English Composition Final Project scores
- Intermediate English Composition Final Project scores

Student Surveys:

- Initial survey collected in Week 1, Midterm in Weeks 4-5, and Final in Weeks 9-10
- Questions about student AI experience, exposure, and perception
- Questions about self-perception as writers - probing whether students feel they have an effective writing or creation process

Student Work Product:

- Collected throughout the term
- Recorded conversations and artifacts gathered from corequisite lab sections

Semi-Structured Follow-Up Interviews:

- Conducted during Weeks 9-10 of the term
- Conducted follow-up interviews with students in AI curriculum sections

Discussion of Curriculum

In our classrooms, we explored a variety of generative AI tools to support student learning, especially in the context of writing, communication, and language development. The appendix contains a list of the tools we demonstrated for students and some of the materials we drew from to teach the AI basics. These tools were not just supplementary; they became part of how we modeled and scaffolded critical skills like comprehension, brainstorming, revision, and advocacy for understanding. Our approach was rooted in accessibility and empowerment, particularly for our multilingual and first-generation college students. It is worth noting that the university offers students a paid account for Grammarly. However, this was the only AI-based tool to which students had premium access.

We began by giving students the basic information about how AI works. Each lesson had these basic components: AI demonstration, time to try the tools for any purpose, and ethical conversation.

Students used AI to simplify instructions and break down complex tasks into manageable steps. Tools like Goblin Tools' "Magic To Do" allowed students to see how large assignments could be unpacked into smaller, more approachable actions. This kind of support was especially helpful for learners who benefit from explicit scaffolding and time management strategies.

AI chatbots were also central to our brainstorming and peer review processes. Students practiced asking clarifying questions, seeking definitions, and requesting simplification—all while engaging in real-time conversation. This process modeled how to advocate for their own comprehension, a crucial skill for multilingual learners. We also experimented with creating custom chatbots using platforms like Playlab, enabling students to simulate conversations or rehearse ideas in a controlled environment.

AI-supported peer review gave students a low-stakes way to receive feedback on their work. Chatbots provided immediate, strengths-based responses that helped build student confidence before engaging in traditional peer review. This was particularly valuable for students hesitant to share their work, offering a bridge toward fuller participation in academic dialogue.

Beyond writing, we integrated AI tools for translation, definition, and visual expression. Students used AI to generate images that reflected their identities. An example of this was a student who created a portfolio cover based on her name, which means "moon princess" in her first language. This helped connect textual and visual literacy in a personally meaningful way.

Finally, we encouraged students to play with language using AI, exploring tone, formality, and audience through humorous or exaggerated prompts. One example began with the sentence "I want to break up with you," and students examined how tone shifted when the AI rewrote it in a sarcastic style. These moments of play became entry points for deeper rhetorical analysis and stylistic exploration.

Limitations of This Study

This study represents students' experiences in a class that is not for credit, which may have affected student engagement, as students were not "required" to use the AI tools. Additionally, it is possible that students in the non-AI labs were independently utilizing AI tools—albeit without the ethical AI curriculum in our experimental group.

While our study did include students from a diverse range of cultural and linguistic backgrounds—and this representation could be a strength of the research—it is worth noting that it may not be generalizable to institutions with different demographic makeups.

Another potential limitation of our research is the relatively small intervention group. We surveyed students within our corequisite lab courses, and while this represents the majority of first-year undergraduate students at our institution, it is only a portion of the undergraduate students, not to mention students in other colleges at the university.

This study represents the context of a specific moment. Given the fast pace of development, both students and faculty now have more awareness of AI. Students may now enter the classroom with different AI perceptions and skills than the participants in the study. Instructors may use AI for their own writing. Universities may have more developed policies and increased professional development for these tools. All of these factors influence the transferability of the results.

Results

To what extent do students report using AI in their writing and creation process?

We wanted to start by gauging student experience with AI tools prior to the term and found that few students used these tools in their process. The number of students who reported using generative AI tools when we started the project was very low. One hundred and ninety-four students (about 66%) reported that they never incorporated AI tools into their writing process. In comparison, only three students (one percent) indicated that they frequently used AI in their writing process. It is worth noting that these findings ran counter to the concerns we were hearing from our colleagues (that every student was using AI on every assignment), and significantly informed how we proceeded with the implementation of curriculum.

What is the correlation between participation in an AI curriculum in a Corequisite English Lab and Written Communication rubric scores in students' associated English courses?

At the end of the term, we examined the effect of AI Lab participation on student performance in two college composition courses, Beginning English Composition (ENG 101) and Intermediate English Composition (ENG 201). Independent-samples t tests and a two-way ANOVA were used to compare final project scores between students who participated in an AI-supported lab section and those who did not.

For ENG 101, students in the AI Lab section scored slightly lower on the final project ($M = 3.18$, $SD = 0.58$, $n = 17$) compared to their peers in the non-AI Lab section ($M = 3.38$, $SD = 0.56$, $n = 64$). For ENG 201, scores were nearly identical between AI Lab students ($M = 3.33$, $SD = 0.42$, $n = 35$) and non-AI Lab students ($M = 3.33$, $SD = 0.62$, $n = 86$) (see Table 1).

Table 1

Descriptive Statistics of Final Project Scores

Is AI Lab?	Core Class	Mean	Std. Deviation	N
No	ENG 101	3.3750	.56344	64
	ENG 201	3.3314	.61649	86
	Total	3.3500	.59288	150
Yes	ENG 101	3.1765	.58473	17
	ENG 201	3.3286	.41908	35
	Total	3.2788	.47911	52
Total	ENG 101	3.3333	.57009	81
	ENG 201	3.3306	.56478	121
	Total	3.3317	.56550	202

A two-way ANOVA revealed no statistically significant main effect of AI Lab participation, $F(1, 198) = 1.10$, $p = .296$, partial $\eta^2 = .01$, nor a main effect of course type, $F(1, 198) = 0.32$, $p = .573$, partial $\eta^2 < .01$. The interaction between AI Lab participation and course type was also nonsignificant, $F(1, 198) = 1.04$, $p = .310$, partial $\eta^2 = .01$ (see Table 2).

Table 2

ANOVA – Final Project Scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	partial η^2
Corrected Model	.530[a]	3	.177	.549	.650	.008
Intercept	1522.419	1	1522.419	4728.658	.000	.960
IsAILab	.354	1	.354	1.098	.296	.006
CoreClass	.103	1	.103	.319	.573	.002
IsAILab * CoreClass	.334	1	.334	1.038	.310	.005
Error	63.747	198	.322			
Total	2306.500	202				
Corrected Total	64.277	201				

To examine student learning across the term, a paired-samples t test compared scores on the first assignment ($M = 3.05$, $SD = 0.99$) with scores on the final project ($M = 3.33$, $SD = 0.57$). Results indicated a significant improvement, $t(195) = –4.04$, $p < .001$, $d = 0.29$, reflecting typical academic growth over the course of the semester (see Table 3).

Table 3

Paired t-test: Initial score to final score

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	1st Score & Final Score	-.28622	.99159	.07083	-.42591	-.14654	-4.041	195	.000

Overall, while students showed significant gains from the beginning to the end of the term, AI Lab participation did not have a statistically significant or practically meaningful impact on final project scores in either Beginning or Intermediate Composition.

How are the students who are using generative AI tools incorporating them as a part of an effective writing and creation process?

While our quantitative findings were not statistically significant, there were rich qualitative findings that have informed our understanding of the use of AI tools and their impact on students. There were multiple sources of qualitative data, allowing a much more detailed and nuanced picture of how students interacted with AI tools and how these tools impacted students' writing process. Echoing recent studies, students reported that AI could serve multiple functions in writing – assistant, tutor, and peer (Kim et al., 2025).

The study's qualitative findings—from surveys, student products, and interviews—revealed a nuanced understanding of AI use among students. Many students initially had limited or no opinion about AI before being introduced to it in their coursework. They typically did not see the point of using AI tools for their writing or research processes. Unlike in studies where more than half of the students surveyed had used AI Chatbots (Bai & Wang, 2025; Ya'u & Mohammed, 2025), many of our students had never tried a generative AI ChatBot before the class. With the open-ended structure that we implemented, students often found their own ways to utilize tools outside of what we demonstrated. By the end of the term, many students who participated in the AI curriculum appreciated the benefits of these tools in streamlining their research and writing processes, but remained cautious about its limitations, matching results in other studies (Chan & Hu, 2023; Karaikudi et al., 2023). As Bailey et al. (2025) showed, students understand that even specific tools like Grammarly produce inaccurate suggestions.

One challenge that arose during the project was other professors' positions regarding AI tools. Many students mentioned that their other professors strongly cautioned against and sometimes prohibited the use of any AI tool, and this was a concern for students participating in the project. One participant mentioned the negative perception that AI is only for cheating or cutting corners in education, echoing participants in the study by Ya'u & Mohammed (2025). Students were very engaged in the conversations we had around the ethics of the tools and their place in the writing process. After using AI in the reflective and cautious environment of the Corequisite Lab course, many recognized its ethical applications and the potential benefits when

used correctly.

A common theme in responses was the confidence that AI tools could provide by clarifying expectations as students navigated assignment instructions. Black and Tomlinson (2025) found that students use these tools to gain a deeper understanding and synthesize information. In our study, one participant mentioned using ChatGPT to help them understand complex readings by simplifying the language, which they found particularly helpful as a student developing English-language fluency. Other students mentioned using the generative AI chatbots to help them simplify or clarify assignment instructions. Additionally, one participant mentioned using ChatGPT to explain things in simpler terms, which helped them grasp the material better. Students appreciated the ability to ask the AI follow-up questions and get explanations tailored to their level of understanding. These uses of AI to clarify expectations may be a way to address the concerns raised by Van de Poel & Gasiorek (2012).

Among multilingual students, translation tools—such as Google translate—were frequently mentioned. Recent research has shown that machine translations are increasing the quality and accuracy of student translations (Duan et al., 2025) and students who are aware of the implicit demands of communication in another language are likely to use AI tools to mediate (Huang and Mizumoto, 2024). Responses indicated that students relied on these tools, including to write in a language other than English and then to use a translation app to convert the work to English. Others mentioned using translation to check the meaning of a word, or to find a more specific term or advanced vocabulary. Students also frequently mentioned using these tools to change a text from English into another language in order to double-check understanding. When students gained experience using generative AI for paraphrasing, they reported asking for a simplified version of the English text that could be more easily understood. For students who are multilingual or learning in a language that is not their first, AI provides valuable support to help them adapt their language to academic expectations. While students could feel empowered by independently adapting their writing to the linguistic demands of the situation, teaching was key. The role of the teacher was to help students critically question how these standards were determined and programmed into the AI tools. In this way, we may begin to address some of the concerns raised by Flores and Rosa (2015) and Tatum and Gue (2012).

Students indicated their appreciation for AI tools that have the ability to narrow down information and provide targeted answers. The students found that AI helped them quickly find relevant information without sifting through excessive amounts of unrelated data. At the same time, some students expressed caution or skepticism, as seen also in Black and Tomlinson (2025). There were concerns about the accuracy of AI-generated content, with one participant mentioning the need to verify information sourced from AI to ensure its reliability. While students were willing to use AI, they did so with a critical mindset, aware of potential biases or inaccuracies.

In terms of the writing process, several participants expressed that using AI tools has had a positive impact on their writing process. One participant highlighted how AI assisted them in generating ideas for assignments, such as identifying social issues for a project. Rather than replacing traditional methods, students viewed AI as a supplementary tool that provides additional support. For instance, when they started with traditional methods like writing outlines in notebooks, AI could help refine ideas or provide sentence starters. Some students liked that generative AI tools can create models or outlines that show how someone would complete the type of assignment they were tackling. It gave students the confidence to get started, but they

mentioned being aware of the ethical problems of using AI to do the writing in place of a human. Beyond assignments, students liked the potential of AI to help them formulate their writing for specific tasks like cover letters and resumes, matching findings in Kim et al. (2025) that writers felt more productive with AI tools.

For editing and revision, many students mentioned using Grammarly and how useful it was for spelling and choosing the "right" words. Students reported that it was useful for improving their grammar and fixing mistakes. In the midterm and final surveys, after we had explored tools that alter text, more students talked about using tools to adjust the formality of the text or change the tone of sentences. Like Black and Tomlinson (2025) demonstrated, students feel that these tools have the power to improve the quality of their writing.

During interviews, many students in the AI-focused corequisite labs reported using AI more frequently at the end of the term compared to the start of the term. Some students continued to not use AI at all, and some that tried it did not find it useful. The response of students that engaged with AI was typically positive, with students feeling that the tools could offer strategies, examples, ideas, and translations that could keep them moving forward in their writing. A summary of AI positives and benefits can be seen in Table 4. The benefits were especially true for multilingual students, who mentioned how the feedback and interaction with AI tools helped them learn. Whether for or against the technology, all students were highly engaged in the ethical discussions around AI, and they were very interested in being part of the conversation about how these tools are used in education.

Table 4

Summary of Positives and Benefits of AI Tool Use

Dimension	Reported Examples
Increased confidence	Navigation and interpretation of assignment instructions
Language support	Translation Comprehension support Vocabulary development
Idea generation	Brainstorming Topic selection Sentence starters
Task-specific writing help	Resumes Cover letters Emails
Accessible revision tools	Grammar Spelling Tone adjustments

(continued)

(continued)

Ethical engagement	Critical discussions and reflections on appropriate AI use
Autonomous exploration	New, creative uses for AI Going beyond what was taught
Customizable help	Follow-up questions Simplified or personalized explanations

While students identified several positive uses of AI tools for the writing process, they also identified a number of negative aspects and concerns around the use of AI tools. These were particularly centered around perceptions and faculty rules about the use of AI. A summary of these negative aspects and drawbacks can be seen in Table 5.

Table 5

Summary of Negatives and Drawbacks of AI Tool Use

Dimension	Reported Examples
Faculty Mixed Messaging	Conflicting guidance from other instructors caused confusion
Cheating Stigma	Personally viewing AI as a shortcut or associating it with dishonesty
Skepticism Toward Accuracy	Caution about the reliability of AI-generated content
Not Universally Useful	Choosing not to use AI Finding it unhelpful

Implications and Recommendations

Pedagogical Implications

Integrating AI tools into writing instruction presents both immediate opportunities and challenges. As other researchers have concluded (Bai & Wang, 2025; Black & Tomlinson, 2025), it is clear that one of the most pressing pedagogical needs is to expose students to these tools in ways that are intentional, guided, and grounded in learning outcomes. Rather than avoiding AI technologies or treating them solely as threats to academic integrity, educators can help students develop strategic and ethical approaches to their use. This is especially important for multilingual learners, who may benefit from AI-powered translation or grammar tools, as Huang and Mizumoto (2024) found. However, instruction must emphasize that these technologies should function as aids that support language learning and writing development—not as a way to avoid the hard work of being a language learner and developing writer—and that help students persist through that process when the challenges become roadblocks.

Additionally, the thoughtful incorporation of AI tools into the classroom can serve as a catalyst for developing critical language awareness and digital literacies. These tools present opportunities for students to engage with nuanced meanings, explore diverse rhetorical strategies, and reflect on the cultural contexts embedded in language use. At the same time, students must learn to evaluate the reliability of AI-generated information, recognize bias in algorithmic outputs, and reflect on the ethical dimensions of use and content production. Kim et al. (2025) find that students report AI bringing joy to their writing process, and that was our experience in the classroom as well. Students had fun playing with these tools and were more willing to try new things. When taught well, AI use can support both writing competence and metacognitive awareness of how language operates in digital spaces.

Institutional and Ethical Considerations

Institutions of higher education bear responsibility for preparing students to navigate the rapidly changing landscape of AI and writing. A policy review by Alqahtani and Wafula (2025) found that universities have largely left AI policy creation to faculty while generally encouraging the adoption of AI. Professors may value the academic freedom to choose any policy from total prohibition to full acceptance, but the variation can create confusion for students (Alqahtani & Wafula, 2025). This confusion surfaced in our research as well because some English teachers prohibited AI tools but required students to use Grammarly, which is an AI tool. Universities must create spaces for open, ongoing dialogue about the ethical and appropriate use of AI tools. Critically, these conversations must include students as active participants. Students should be empowered to share their perspectives, contribute to policy development, and engage in shaping norms around AI use in academic work. In a review of Big Ten Universities, Wu et al. (2024) found that policies are often written from a faculty or administrative point of view rather than with consideration of students' viewpoints. Without student input, institutional guidance risks being out of touch with how these technologies are actually used and perceived in learning contexts.

Moreover, ethical considerations around AI in education must remain central to institutional decision-making. Many AI tools are trained on data that reflect dominant cultural norms, which can lead to the reinforcement of narrow linguistic and rhetorical standards. This raises concerns about whose voices are privileged and whose are excluded in AI-generated outputs. Universities must therefore remain vigilant in examining the cultural assumptions embedded in AI tools and ensure that these technologies support, rather than undermine, linguistic diversity and inclusion. This requires sustained attention to equity, transparency in policy development, and ongoing analysis of the social implications of AI-mediated writing practices.

Recommendations for Future Research

While the current pedagogical and institutional needs are clear, there are also multiple emerging areas that warrant further research. One area is the differentiated use of AI tools in the classroom. Rather than treating AI as a monolithic entity, researchers should investigate how different tools and their various uses—such as generative writing assistants, grammar checkers, and translation platforms—affect student learning in distinct ways. Understanding these

differences will allow educators to make more informed decisions about which tools and approaches best support specific pedagogical goals.

Faculty innovation is another valuable area of exploration. As instructors across disciplines experiment with AI in their teaching, their practices can offer insights into novel and discipline-specific applications. Research into these instructional experiments can highlight creative strategies, potential pitfalls, and ways to foster student engagement. Additionally, translation tools deserve closer scrutiny, particularly in multilingual writing contexts. Studies should examine how these tools impact language development, identity, and the potential for overreliance. Do such tools support or hinder students' long-term growth as writers?

Finally, future research should focus on the broader question of how the use of AI tools affects writing outcomes, critical thinking, and students' ability to transfer skills across contexts. Do these tools lead to improved writing performance or a deeper understanding of rhetorical concepts? Do they support independent thinking or risk automating students' choices? These questions are central to understanding the evolving role of AI in writing education and ensuring that its adoption serves meaningful and equitable learning.

Conclusion

Through this project, we identified opportunities to incorporate AI into our classrooms. There has been significant change since we began this work, with a shift in attitudes away from fear and towards curiosity about the use of AI. As we have presented on this topic, colleagues have been eager to discuss the opportunities and concerns around generative AI. Many of them have begun to use AI themselves. Others have adjusted their assignments to include generative AI tools as part of the work.

At the same time, the AI educational landscape keeps changing. The school districts that many of our students come from have begun to incorporate AI into the curriculum, so we expect more students to come to us with AI experience. These students will expect to continue to use these tools for support and will want opportunities to gain new skills to expand their technological repertoire.

Our research did not show a significant impact on student writing scores, and this made sense, as there are many different factors that contribute to students' growth as writers. However, in this project we have identified a number of opportunities to integrate AI into our classrooms, and we are only beginning to explore the possibilities and nuances of these practices. Far from eroding honesty, and undermining skills AI—when used thoughtfully—can be one more tool that empowers students to be successful in college.

References

Alqahtani, N., & Wafula, Z. (2025). Artificial Intelligence integration: Pedagogical strategies and policies at leading universities. *Innovative Higher Education, 50*(2), 665–684. https://doi.org/10.1007/s10755-024-09749-x

Bai, Y., & Wang, S. (2025). Impact of generative AI interaction and output quality on university students' learning outcomes: A technology-mediated and motivation-driven approach. *Sci Rep, 15*(24054). https://doi.org/10.1038/s41598-025-08697-6

Bailey, D., Lee, A., He, H., McConnell, J., Wilson, D. & Chakrabarti, K.B. (2025). Writing support with Grammarly: Examining confidence, help-seeking behavior, and user perceptions in higher education. *Turkish Online Journal of Educational Technology - TOJET, 24*(1), 90–105. https://eric.ed.gov/?id=EJ1466294

Black, R.W., & Tomlinson, B. (2025). University students describe how they adopt AI for writing and research in a general education course. *Sci Rep, 15*(8799). https://doi.org/10.1038/s41598-025-92937-2

Brossi, J., Castillo, A.M., & Cortesi, S. (2022). Student-centered requirements for the ethics of AI in education. In W. Holmes & K. Parayska-Pomsta (Eds.), *The ethics of artificial intelligence in education: Practices, challenges, and debates*. Routledge.

Cavaleri, M., & Dianati, S. (2016). You want me to check your grammar again? The usefulness of an online grammar checker as perceived by students. *Journal of Academic Language and Learning, 10*(1), A223-A236. https://journal.aall.org.au/index.php/jall/article/view/393

Chan, C. K. Y., & Hu, W. (2023). Students' voices on generative AI: perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education*, *20*(1), 43–18. https://doi.org/10.1186/s41239-023-00411-8

Duan, H. Gao, X. & Zhang, Y. (2025). The application of AI translation tools in improving students' translation fidelity and accuracy. *Arab World English Journal, 16*, 290–306.

Flores, N., & Rosa, J. (2015). Undoing appropriateness: Raciolinguistic ideologies and language diversity in education. *Harvard Review*, *85*(2), 149-171. https://eric.ed.gov/?id=EJ1066039

Goldberg, A., Russell, M., & Cook, A. (2003). The effect of computers on student writing: A meta-analysis of studies from 1992 to 2002. *The Journal of Technology, Learning, and Assessment, 2*(1), 3-51.

Hostetter, A., Call, N., Frazier, G., James, T., Linnertz, C., Nestle, E., & Tucci, M. (2024). Student and faculty perceptions of generative Artificial Intelligence in student writing. *Teaching of Psychology, 52*(1). *https://www.researchgate.net/publication/383927117_Student_and_Faculty_Perceptions_of_Generative_Artificial_Intelligence_in_Student_Writing*

Huang, J. & Mizumoto, A. (2024). Examining the relationship between the L2 motivational self system and technology acceptance model post ChatGPT introduction and utilization. *Computers and Education: Artificial Intelligence*, *7*. https://doi.org/10.1016/j.caeai.2024.100302

Jeffrey, T. (2020). Understanding college student perceptions of artificial intelligence. *Journal of Systemics, Cybernetics and Informatics*, *18*(2), 8–13. https://www.iiisci.org/journal/PDV/sci/pdfs/HB785NN20.pdf

Karaikudi, I., Antony, S., & Ramnath, R. (2023). A phenomenological exploration of students' perceptions of AI Chatbots in higher education. *The International Academic Forum*, *11*(2). https://iafor.org/journal/iafor-journal-of-education/volume-11-issue-2/article-1/

Kim, J., Yu, S., Detrick, R. & Li, N. (2025). Exploring students' perspectives on generative AI-assisted academic writing. *Education and Information Technologies, 30*(1), 1265–1300.

Klimova, B. (2014). Using corpus linguistics in the development of writing. *Procedia - Social and Behavioral Sciences*, *141*, 124–128. https://www.researchgate.net/publication/265387523_Using_Corpus_Linguistics_in_the_Development_of_Writing

Kohnke, L., Moorhouse, B. L., & Zou, D. (2023). ChatGPT for language teaching and learning. *RELC Journal, 0*(0). https://doi.org/10.1177/00336882231162868

Leu, D., Slomp, D., Zawilinski, L., & Corrigan, J.A. (2016). Chapter 3, Writing research through a new literacies lens. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of Writing Research*. Guilford Press.

Martinez, R.A., Orellana, M. F., Pacheco, M., & Carbone, P. (2008). Found in translation: Connecting translating experiences to academic writing. *Language Arts*, *85*(6), 421-431.

Nugroho, A., Andriyanti, E., Widodo, P. & Mutiaraningrum, I. (2025). Students' appraisals post-ChatGPT use: Students' narrative after using ChatGPT for writing. *Innovations in Education and Teaching International*, *62*(2), 499–511.

Pack, A. & Maloney, J. (2023). Using generative artificial intelligence for language education research: Insights from using OpenAI's ChatGPT. *TESOL Quarterly*.

Phillips, N. & Manderino, M. (2015). Access, equity, and empowerment: Supporting digital literacies for all learners. *UIC Research on Urban Education Policy Initiative: Policy Brief,* 4(3), 1-18.

Prior, P. (2006). A sociocultural theory of writing. *Handbook of Writing Research*, (pp. 54-66).

Saljo, R. (2010). Digital tools and challenges to institutional traditions of learning: technologies, social memory and the performative nature of learning. *Journal of Computer Assisted Learning, 26*(1). https://doi.org/10.1111/j.1365-2729.2009.00341.x

Schmidt-Fajlik, R. (2023). ChatGPT as a grammar checker for Japanese English language learners: A comparison with Grammarly and ProWritingAid. *AsiaCALL Online Journal, 14*(1), 105–119.

Tatum, A., & Gue, V. (2012). The sociocultural benefits of writing for African-American adolescent males. *Reading and Writing Quarterly*, *28*(2), 123-142.

UNESCO. (2019). *Beijing consensus on artificial intelligence and education*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000368303.locale=en

Van de Poel, K., & Gasiorek, J. (2012). Effects of an efficacy-focused approach to academic writing on students' perceptions of themselves as writers. *Journal of English for Academic Purposes*, *11*(4), 294-303 https://www.sciencedirect.com/science/article/abs/pii/S1475158512000409

Valenzuela, A. (2005). *Subtractive schooling, caring relations, and social capital in the schooling of U.S.-Mexican youth*. State University of New York Press.

Wagner, T. (2010). *The global achievement gap: Why even our best schools don't teach the new survival skills our children need — and what we can do about it*. Basic Books.

Warschauer, M., Arada, K., & Zheng, B. (2010). Laptops and inspired writing. *Journal of Adolescent and Adult Literacy, 54*(3), 221-223.

Wu, C., Zhang, H., & Carroll, J. M. (2024). AI governance in higher education: Case studies of guidance at big ten universities. *Future Internet, 16*(10), 354.

Yan, D. (2023). Impact of ChatGPT on learners in a L2 writing practicum: An exploratory investigation. *Education and Information Technologies*. https://doi.org/10.1007/s10639-023-11742-4Ya'u, M. S., & Mohammed, M. S. (2025). AI-Assisted writing and academic literacy: Investigating the dual impact of language models on writing proficiency and ethical concerns in Nigerian higher education. *International Journal of Education and Literacy Studies, 13*(2), 593–604. https://eric.ed.gov/?id=EJ1468638

Yoon, H. (2008). More than a linguistic reference: The influence of corpus technology on l2 academic writing. *Language Learning & Technology 12*(2), 31-48. https://scholarspace.manoa.hawaii.edu/server/api/core/bitstreams/9d7d4802-8866-4246-af19-69187c5f14bc/content

Yosso, T. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education*, 8(1), 69-91.

Zafar, S., Ayaz, N., Bibi, H., & Ghazanfer Abbas, S. (2025). The effect of ChatGPT on the critical thinking skills of secondary students: A survey-based study. *Journal of Social Signs Review*, *3*(03), 243–259. https://socialsignsreivew.com/index.php/12/article/view/164

Zhou, M., & Peng, S. (2025). The usage of AI in teaching and students' creativity: The mediating role of learning engagement and the moderating role of AI literacy. *Behavioral Sciences (2076-328X), 15*(5), 587.

Zoch, M., Adams-Budde, M., Langston-Demott, B. (2016). Creating spaces for students to position themselves as writers through experiences with digital writing. *Texas Journal of Literacy Education*, *4*(20), 111-125.

Appendix A: List of Tools Used

List of generative AI tools use with students in writing:

- Chat GPT
- Goblin Tools
- Consensus
- Claude.ai
- Grammarly and Quillbot
- Gemini
- Copilot
- Playlab

Resources used with students to develop understanding of how AI works:

- Overview ‹ AI + Ethics Curriculum for Middle School — MIT Media Lab
- Algorithmic Justice League
- LLMs and machine learning