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# **AI-assisted Writing: ChatGPT Paradigm Shift**

*Completed Research Paper or Research in Progress Paper*

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## **Abstract**

This study aims to introduce the recent developments of ChatGPT as an AI-assisted writing tool and the novel AI Literacy framework, which should facilitate the optimal utilization of Generative AI technology. The framework was initially tested with academics, leading to the identification of six constructs: application, accountability, authenticity, and agency, all of which advocate for AI literacy. Subsequently, this study tested the model with 50 students enrolled in business communication courses at a large state university in the United States. The primary focus of the study was to adapt the model in higher education settings while examining the AI Literacy constructs among students. The study presents the results of the analysis and provides recommendations for incorporating ChatGPT into the classroom. Furthermore, this research aims to share knowledge and principles with Latin American business communication educators and practitioners, with the objective of advancing the practical use of curriculum design and workplace application.

## **Keywords**

AI-Assisted Writing, Generative AI, ChatGPT, AI Literacy, Large Language Models, Natural Language Processing

## Introduction

Large Language Models (LLMs) have a history dating back to the 1980s. Early models were used for natural language processing (NLP) but were limited in capturing natural language arguments. The introduction of neural language models in the 2000s brought significant advancements in NLP. Artificial intelligence (AI) has made significant advancements in recent years, leading to the development of AI-assisted writing tools such as ChatGPT. Developed by OpenAI, ChatGPT is the leading LLM with 175 billion parameters to analyze natural language producing human-like textual responses. As an advanced language model, it utilizes Generative AI technology to assist users in generating written content responding to prompts. Integrating such tools in educational settings holds great potential for enhancing students' writing skills and fostering AI literacy. While ChatGPT has gained rapid adoption in various fields, its application in education remains controversial. Schools are debating whether to restrict or leverage the use and have considered the impact on teaching strategies, academic integrity, assessments, and students critical thinking. Using generative AI raises concerns about the authenticity of the student's work.

This paper briefly discusses ChatGPT as a AI-assisted writing tool and the Federal Trade Commission (FTC) and the European Union (EU) advancements regarding AI consumer security. The paper also discusses the newly introduced AI Literacy model and the first test conducted with undergraduate students mapping to confirm utility of the model constructs. Finally, it highlights the need for academic governance of AI-assisted writing and the need to address trusted content and authorship. The study also aims to extend its findings and recommendations to Latin American business communication educators and practitioners. The research seeks to advance the practical use of curriculum design and workplace application in Latin American contexts by sharing knowledge and principles.

## Literature Review

Large Language Models (LLMs) have a rich history dating back to the early days of computing. The first LLMs were developed in the 1980s and 1990s (Jacob & Shantanu, 2022; Scholten, 2023). Before the development of deep learning, two popular models used for natural language processing were the Hidden Markov Models (HMMs) and N-Gram models (Tamoghna, 2023). According to Tardif (2023) the development of Large Language Models has its roots in early natural language processing (NLP) and machine learning research.

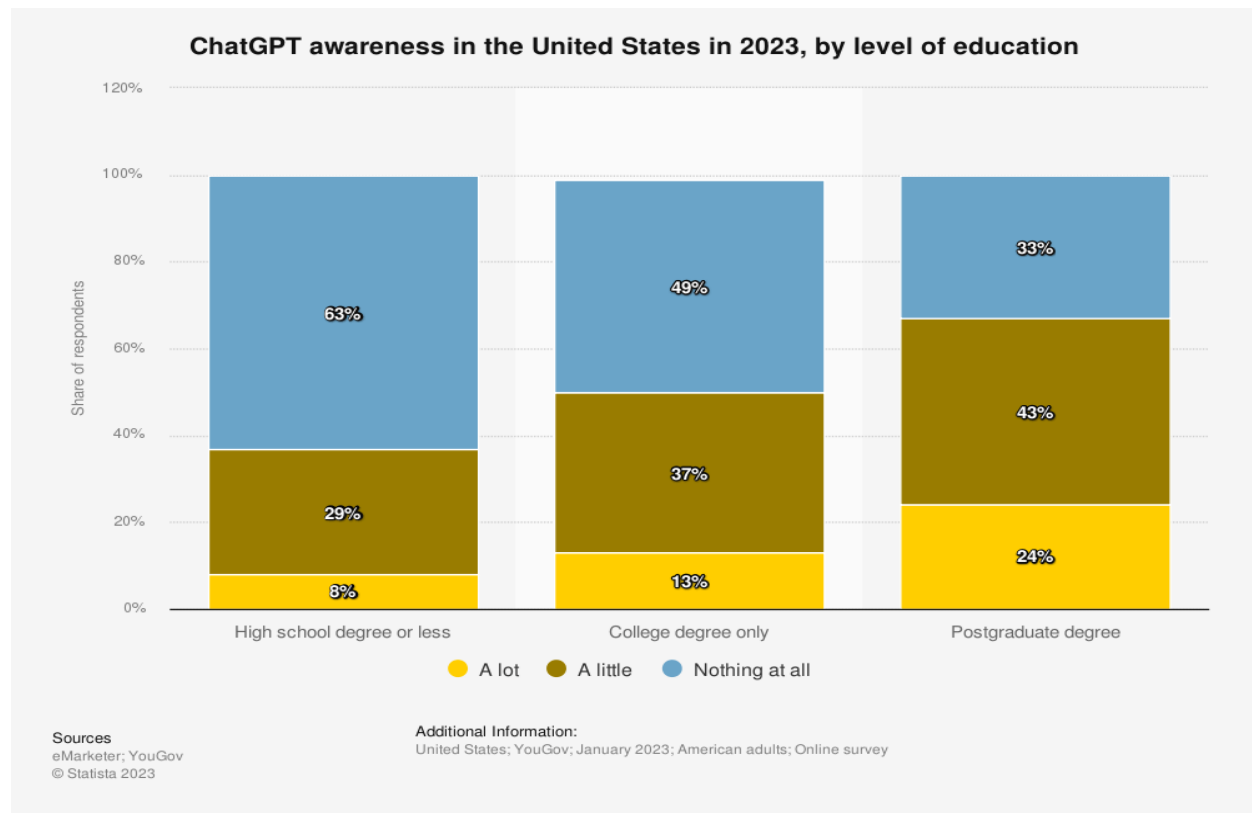
The early LLMs could not capture natural language arguments due to reduced computational power and data availability. The models were simplistic and could not associate word dependencies as in natural language. The word prediction was constrained to N-Gram where 1-3 words equal "N" based on the possible sequence. An N-Gram is an algorithm for modeling words in sequence to find and predict single or blocks of words (AI Chat, 2023). The N-Gram concept is similar to the auto-complete feature in text editors. Computational linguistics, NLP, and AI have worked on modern advances using longer N-Gram approaches. The approach allows for more accurate word predictions by relying on large datasets and significant computational power.

In the 2000's, the emergence of large language models was the next milestone in this progression. The introduction of neural language brought a new direction in NLP by simply interconnecting units or neurons arranged in layers, which grew to exceptional sizes. In 2017, the inception of end-ground language models, larger data sets and computation, and the introduction of the Transformer Architecture steered the evolution and rapid growth of LLMs such as ChatGPT (Chen, 2023). In the 2020's, the computational power and LLMs size has grown, playing a significant role in developing generative AI offerings. For example, in 2018, language models with millions of parameters were substantial, but by the end of 2022, models like ChatGPT had 175 billion parameters, making them massive. ChatGPT, developed by OpenAI, is leading LLMs advancements by integrating the collaboration from various investors and research groups.

While the field of generative AI continues to evolve, previous versions did some functions of ChatGPT. Still, the output quality produced different results than human perspectives. According to Gosh (2023), it is important to acknowledge that developing large language models is a collaborative effort involving multiple

research groups and companies. OpenAI's contribution has been significant, consolidating advancements, massive datasets, and releasing models at an accelerated pace. The evolution of GPT-3 to GPT-4 is considered the most significant growth of deep learning to create generative AI models. Generative AI is artificial intelligence technology that can produce various types of content, including text, imagery, audio, synthetic data, or other media, in response to prompts. Generative AI (GenAI) or artificial intelligence technology can produce various types of content, including text, imagery, synthetic audio data, or other media, in response to prompts (Lawton, 2023). Generative models learn the patterns and structure from input data and then generate new content similar to the training data but with innovation built in.

ChatGPT, a generative AI prototype, was publicly introduced in November 2022 and has made an important transition in the population. It made headlines as a novel invention capable of conversing with humans and doing research. Within weeks, it reached millions of users, leading to the fastest adoption curve of any technology. Figure 1 (eMarketer, 2023) shows the number of people already familiar with ChatGpt in the U.S. as of February 2023.



**Figure 1. ChatGPT Awareness by Level of Education**

Despite the positive acceptance in the workplace, it remains controversial because of possible misuses. Although educational institutions find value, ChatGPT presents more challenges than opportunities. Schools are slow adopters because they need convincing on how a double edge sword is for the good of education. The main concern is having to justify the technology and align it with ideologies and administrative processes. Other considerations include new teaching strategies to address ChatGPT relevance and impact on students. Many schools still need to decide whether to restrict ChatGPT or block it unless an assignment encourages reflection, emphasizes critical thinking, or highlights the human experience. Others are figuring out how to set policies and leverage ChatGPT as a study partner for learning.

Businesses that understand the deeper inter-works of ChatGPT have a considerable advantage in enhancing productivity in a wide range of tasks. Many similar chatbots with significant capacity will be available to produce written materials, audio, and video. On the downside, ChatGPT was introduced without guidance



for safety and accuracy, leading to skeptical responses in more structured environments. Since ChatGPT can produce essays and written text, the application to schoolwork has many disagreements, failing to reach a consensus. On the administrative side, the need to continually adapt teaching and assessment methods is being considered. For professors, the assessment for written assignments can also benefit from ChatGPT, particularly in providing formative feedback to many students.

## Generative AI and Regulations

### Federal Trade Commission Ethical Considerations

The Federal Trade Commission (FTC) promotes competition, protects, and educates consumers on various issues, including AI. The discussion of AI regulations addresses the consumer and individuals affected by AI practices. The educational sector is excluded from the FTC and other agencies and leaves decisions to the leaders in education. With the introduction of generative AI, the FTC is trying to regulate deceptive AI practices for consumers and prevent monopolistic businesses. The FTC has jurisdiction over various activities, including advertising, marketing, and product safety. Since 2019, the FTC has been active in artificial intelligence (AI), and it issued the first report on AI and consumer protection. The guidelines identified several potential risks associated with AI as follows (FTC, 2022).

**Bias:** AI systems can be biased in their decision-making, leading to discrimination against certain groups of people.

**Privacy:** AI systems can collect and use large amounts of personal data, which can raise privacy concerns.

**Security:** AI systems can be vulnerable to hacking and other security threats.

**Safety:** AI systems can malfunction or make mistakes, harming consumers.

**Commercial surveillance:** AI tools can be used to track and monitor individuals' online activity, physical locations, and even conversations.

To address AI risks, the FTC has taken several steps, including a guidance document, consumer protection, and action enforcement against companies violating the FTC's laws in connection with AI. The work is ongoing, and the agency continues to monitor AI development to identify consumer risks. The FTC also works with other federal agencies, such as the Department of Justice and the National Institute of Standards and Technology, to develop a coordinated approach to regulating AI. In addition, it has taken initiatives to control credit practices that include AI to support the Fair Credit Reporting Act (FCRA) and the Equal Credit Opportunity Act (ECOA). Ajao (2021) discusses that the FTC forbids using racially biased or unexplainable algorithms for consumer credit, employment, housing, and insurance. The latest initiatives will focus on designing generative AI and machine learning products (State, et al., 2023).

### European Union and AI Ethical Considerations

The European Union (EU) also protects the consumer in AI initiatives. The EU has proposed new laws and regulations to fully utilize AI and reap its rewards during the Digital Decade. The "Coordinated Plan on AI" advances strategic alignment, policy action, and investment acceleration. The AI Act is the first proposal in the world for a legal framework governing the use of AI. Specifically, the Act will establish a risk-based framework to regulate AI-related applications, products, and services.

In light of the political context, the AI Commission proposes regulation based on the strategies to accelerate investments in AI, act on AI strategies, and align AI policies to global challenges (European Commission, 2021a). The specific goals are as follows.

- Ensure that AI systems placed on the Union market and used are safe and respect existing laws on fundamental rights and Union values.

- Ensure legal certainty to facilitate investment and innovation in AI.
- Enhance governance and effective enforcement of existing law on fundamental rights and safety requirements applicable to AI systems.
- Facilitate the development of a single market for lawful, safe, and trustworthy AI applications and prevent market fragmentation.

According to the European Commission (2021b), there are several measures to shape Europe in the digital AI future. The framework covers short and long-term goals, management measures, and financial impact to assess the effect of the regulation and policy implementation. It aims to balance rules for communications networks, content, technology, industry, and entrepreneurship. The budgetary impact relates to the new tasks assigned to the Commission, including support for establishing an EU AI Board.

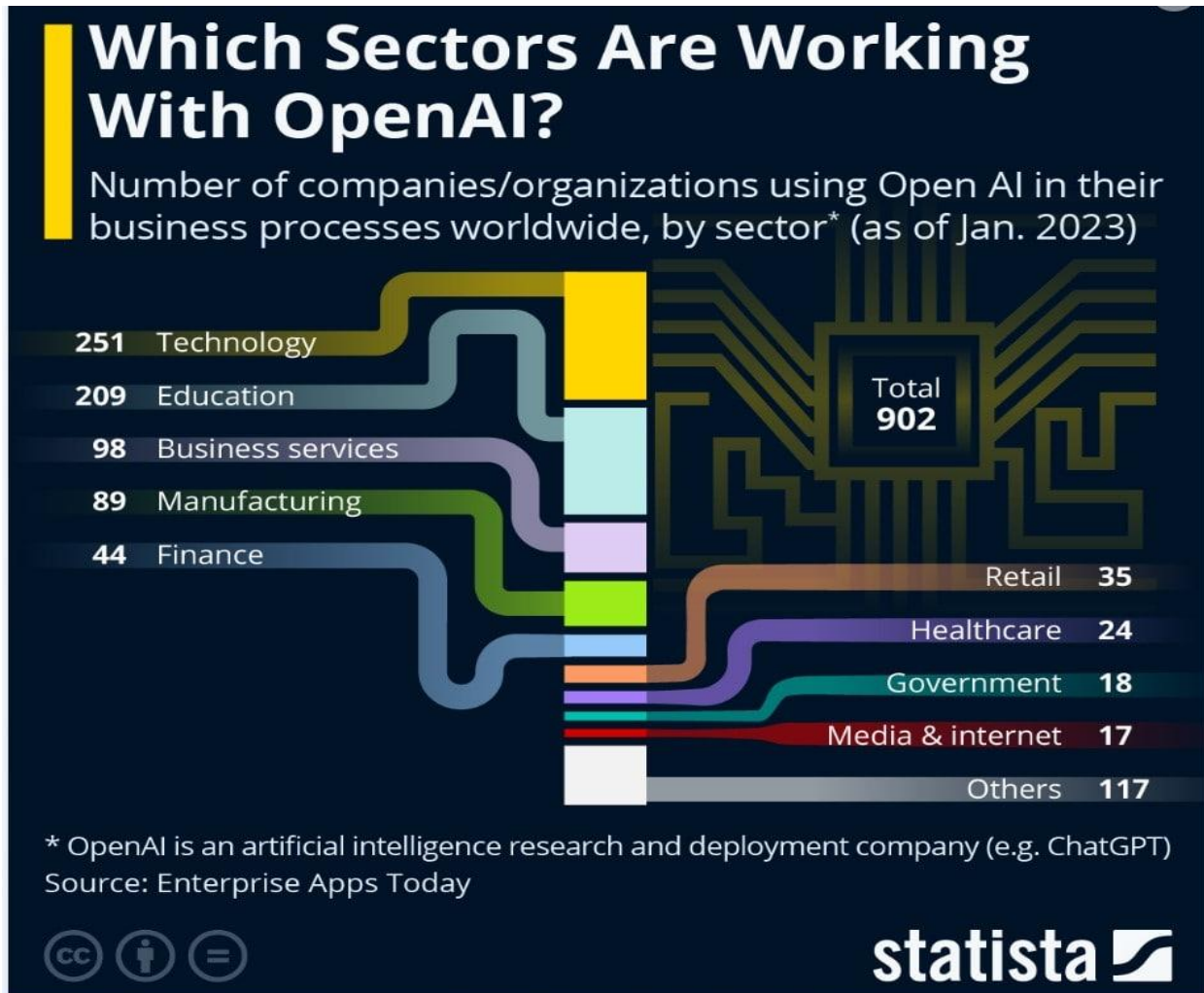
The FTC and EU are concerned with data privacy and security regarding AI use in schools; however, their jurisdiction excludes generative AI as it relates to learning applications.

### **AI Literacy and Communities of Practice**

As the generative AI era develops, challenges and opportunities exist, such as establishing frameworks and communities of practice. AI-assisted writing, as with any technology introduction, is bounded to ethical (Cardon et al., 2023), political, and economic alignments traditionally articulated for acceptance and adoption. While ChatGPT immediate adoption is evident in all fields and industries, Figure 2 (eMarker, 2023) displays how it is used (usage) in the various sectors. Since education is the second leading user, it is assumed that students are already using it in multiple ways, so some boundaries are needed.

In education, the emergence of AI-assisted writing has diverse implications for students' work because of plagiarism and possibly incorrect information. The new generation of AI tools is designed to be user-friendly and generate text on demand, enticing users to converse online and create a close-to-human-like paper (Terry 2012). As the new AI tool, ChatGPT is widespread and popular, but many schools are blocking it as a learning tool. While AI-assisted writing enthusiasm is worldwide, its usage is beneficial and controversial, raising uncertainty about ethical considerations in authorship. The reliance on ChatGPT concerns higher education about diluting problem-solving and diminishing the critical thinking skills core to good education.





**Figure 2. Sectors Working with Open AI**

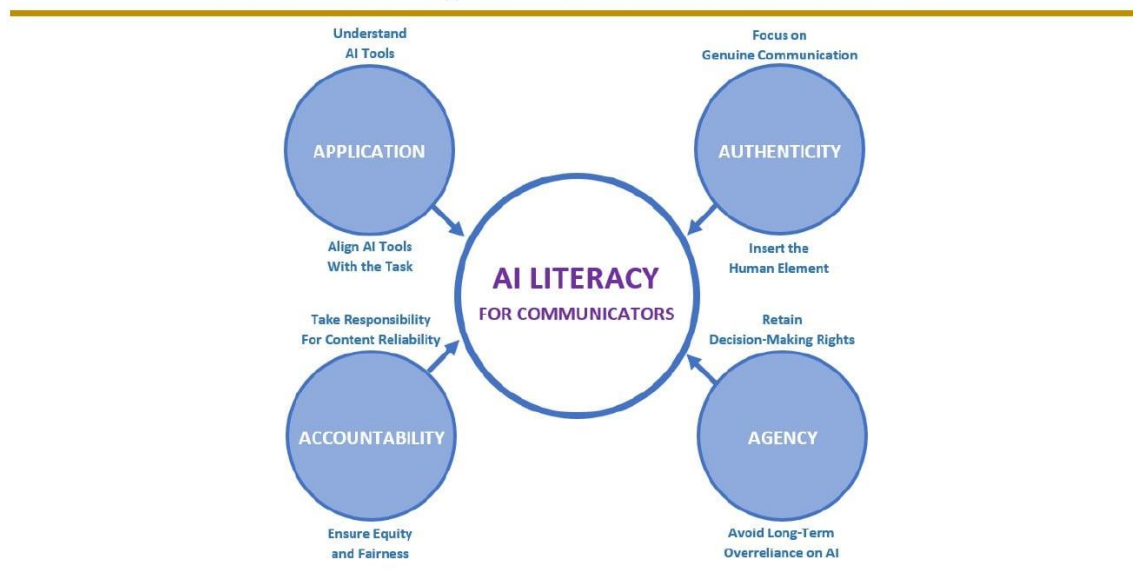
Owen (2013) suggests that there should be a division between assignments where the use of AI as a writing assistant is encouraged and assignments where AI is not beneficial. He argues that colleges should prepare students for the future by promoting AI literacy but also emphasizes that AI is not the only avenue to succeed in school. That means that education systems should move away from traditional take-home essays and explore alternative forms of assessment, such as oral exams, in-class writing, or new types of schoolwork less susceptible to AI influence. There is a lack of instruction policies on how to utilize AI best, and at the same time, there is insufficient control to prevent AI from obstructing critical thinking exercises. The uncertain middle ground leaves academics wondering how to proceed while advocating a well-thought-out approach to integrating AI into education. Owens also supports developing AI literacy while ensuring it does not replace critical thinking skills. Educational institutions can better adapt their coursework to modern AI by reevaluating an AI literacy framework.

While research on ChatGPT and similar tools predict all-inclusive use for writing tasks, the trends offer valuable insights into fields like biomedical research and scientific publishing (Rahman et al. 2023). More recently, Cardon et al. (2023) advocated that AI-assisted writing will dominate business communication, and instructors must conceptualize how to teach the field. The authors also discuss establishing a community of practice or a group of academics and intellectuals to brainstorm the ethical, political, and economic framework suitable to ChatGPT. Schools can also reflect on the issues of academic integrity,

educational technologies, creativity, and originality in content creation, research, and service. The idea is to come up with a unified framework and stay away from silo thinking. The authors suggest adapting the AI Literacy model to a guiding question list, which can prepare students to build AI literacy and become acquainted with assessment practices.

Similarly, collaborating with the industry to establish and design ethical models for AI use should be a priority. Cardon et al. proposed the first AI Literacy model for communicators to effectively incorporate AI-assisted writing tools like ChatGPT in education. This framework aims to give students the necessary knowledge and skills to understand, evaluate, and ethically use AI technologies. The framework highlights the importance of integrating AI-assisted writing tools into communication practices to enhance effectiveness. It emphasizes the need to maintain authenticity and agency, ensure that human input logically interacts with AI tools, and establish personal accountability (Bollen, et al. 2023). Additionally, it highlights the significance of relying on trustworthy and credible sources of information.

## AI Literacy for Communicators



Source: Cardon, P. W., Fleischmann, C., Aritz, J., Logemann, M., & Heidewald, J. (2023). The challenges and opportunities of AI-assisted writing: Developing AI literacy for the AI Age. *Business and Professional Communication Quarterly* (in press).

**Figure 3. AI Literacy Model**

It is also critical to research the relationship between AI use and the future of knowledge workers in the workplace. Academic researchers could focus on rethinking career readiness using the ubiquity of generative AI and other tools for entrepreneurship, business strategy, and industry compliance and regulation, among other topics.

## Methodology

In Cardon et al. (2023), the AI Literacy framework was initially tested by academics, identifying six constructs: application, accountability, authenticity, and agency. They recommended trying the model with administrators, students, and other practitioners since their research was only tested with instructors. To arrive at the AI Literacy model constructs, the authors administered a survey asking closed and open questions to 343 instructors across the United States. The authors also encouraged student testing to capture their views as a benchmark to help develop instructional practice in business communication





courses. Following this opportunity, the researcher invited undergraduate students to an in-class exercise or "test-drive" ChatGPT. To further explore the practical implications of the AI Literacy framework, this study involved 50 students enrolled in two business communication courses at a large state university in the United States. The objective was to adapt ChatGPT in higher education and evaluate the student's understanding and application of the AI Literacy constructs.

Based on the model constructs, the researcher developed a set of exercises and questions to test the model's feasibility. The goal was to determine how students would use ChatGPT and their expectations regarding the appropriate use of AI-assisted writing for course assignments. The students sat at tables of five students to engage in group discussions after the ChatGPT exercise. The exercise lasted two hours, and their active participation earned them 50 bonus points. The students were interested in exploring ChatGPT and its viability, although they were concerned about potential academic dishonesty. To familiarize themselves with ChatGPT, the participants received a list of prompts and four questions to reflect on their ChatGPT experiences after the exercise. Some exercise prompts come from ideas updating course activities with AI in mind (UCLA, 2023).

The list of exercise prompts is as follows. Before engaging in the exercise, the students created an account on openai.com to access the ChatGPT free version.

1. Pose a question to ChatGPT, such as a homework assignment query asking "the similarities between direct and indirect approaches to writing." Assess the quality of its response.
2. Experiment with modifying the prompt to observe how it impacts the output from ChatGPT. Reword the sentence above at least three different ways to obtain multiple results.
3. Submit results from #2 to Grammarly and Turnitin for possible plagiarism detection.
4. Request ChatGPT to synthesize text from lengthy documents, like a 1,000 words text article, and generate a 10-slide PowerPoint presentation with headings and bullet points to make a compelling case for action.
5. Use the #4 article to generate three discussion prompts.
6. Use the previous report for ChatGPT to produce three questions using Bloom's Taxonomy lower levels.
7. Request to write an email introducing yourself to the upcoming Eagle Tank school club. Give your major, GPA, and desired career field.
8. Ask ChatGPT to respond to a short writing essay of 300 words. Ask for a specific style, such as emulating a professor's feedback on the essay's positive and negative aspects. Use your last assignment discussion innovation as the input.
9. Take the ChatGPT "professor feedback" from #8 and review the output for errors or improvements.

After the exercise, the students had half an hour to answer four open-ended questions to solicit enough reflection. The questions were directly mapped to the AI Literacy model to test each construct.

1. Explore with your group how ChatGPT can enhance writing and problem-solving skills (Application).
2. Reflect on how ChatGPT could benefit business writing students in the course (Accountability).
3. Think of the email draft in #7. Were you satisfied with the results or would you change something? (Agency)
4. Reflect on your critical thinking abilities during the exercise. Did you review or improve the "professor feedback" output? (Authenticity)

## **Analyzing the AI Literacy Model and Results**



For exercises #1-3, the students follow the specific prompts related to "the similarities between direct and indirect approaches to writing." The phrase was rephrased at least thrice, creating iterations to observe if the tool would yield consistent responses. Although the eight responses were on-topic, they were constructed and worded differently. Despite the variations in phrasing and the diverse sample of students, all responses differed. The task asked the students to upload their responses to Canvas and later to Grammarly. Initially, Turnitin did not detect any instances of plagiarism; however, after stressing Canvas to more uploads, Turnitin began reporting similarity indices ranging from 3% to 45%, shown in the AI detection tool only. Surprisingly, Grammarly Premium provided minimal suggestions to enhance clarity and correctness, indicating that all the responses were well-written and fluent.

For exercise #4, ChatGPT suggested a slide deck summarizing the article. Although ChatGPT cannot create slides, it provides key points for each slide. Later, the students were asked to present the slide findings in a table format. The output was presented well organized and by key points. It is worth noting that the results are interesting for educators in exercises #5 and 6. Those were helpful for educators who often search for various discussion questions for Socratic questioning or simply online discussions. The ChatGPT questions are intriguing and give ideas, although they could be revised. They serve as inspirations. Next, the students were asked to create three more questions based on Bloom's Taxonomy categories. These questions all provide starting points to establish class discussions and elevate the conversations and delve into new issues through progressive abstraction.

Exercises #7-9 were written according to the instructions and offered no novelty other than providing different and unique writing drafts for each of the 50 students sampled. The following statements further elaborate on the reflections and positive feedback from the students regarding using ChatGPT for learning. It is essential to explicitly outline these expectations in the syllabus and engage in classroom discussions. Acknowledging that students may encounter varying expectations from different instructors is vital.

The post-exercise discussion allowed students to reflect on ChatGPT, pushing the edge of significant educational change. Mhlanga (2023) said that generative tools are revolutionary and crucial in shaping the academic future. Like search engines, AI generates answers and obtains results without one going through the process of researching and comparing notes. Students further elaborated on the positive and negative implications. Concerns were raised about increasing plagiarism similarity indices and the long-term effects on their motivation to study, engage, and retain knowledge in class. It is important to recognize the potential benefits as well. Students also conveyed that AI could save them time and effort on research tasks, offer fresh perspectives on problem-solving, and generate content for analysis and critique. Like search engines, AI-assisted writing can assist in information finding for decision-making. While ChatGPT can write with correct grammar and flow, it needs more depth and formal citations. Its output relies on word patterns and randomness, but ChatGPT has limitations. For example, the University of Wisconsin-Madison (2023) recommends reflecting on the AI strengths and weaknesses perceived for teaching and learning.

The students also emphasized that there is no deeper learning if one only relies on ChatGPT findings without understanding the underlying rationale. One would only obtain answers if one comprehended why they make sense or how to expand one's understanding. The learning process requires reasoning rather than just getting a response. Education is not solely about obtaining correct answers but also about understanding and the moral judgment and reasoning behind them (Krügel et al., 2023). Consequently, AI should be used to enhance learning and consider safeguarding the traditional learning process. It is crucial to align ChatGPT and other content generators to their benefits while ensuring that students actively participate in learning, develop critical thinking skills, and receive instructor guidance. AI should complement traditional teaching methods and facilitate learning rather than replace the learning process.

Table 1 shows the comments and classification of the post-exercise questions. The five participants per table answered the four questions as a group. Due to time limitation in the classroom, only a few answers were collected per table, representing the consensus of the table group. In total, there were ten tables

representing the 50 students. The typical answer was 1-2 comments and enough to observe and interpret the context of the model constructs. It is noted that more positive comments prevailed in their answers.

<b>AI Literacy</b>	<b>Example of Students' Reflections on Questions 1-4 Testing the Model</b>
<b>Application Positive Comments</b>	"Valuable resource for research materials." "Offers a choice as a research material." "Can assist in expanding one's vocabulary." "Create scripts for presentations, podcasts, interviews, etc."
<b>Application Negative Comments</b>	"Create trouble for using AI-generated for assignments for which the professor did not permit."
<b>Accountability Positive Comments</b>	"Offers personalized learning by facilitating additional questions." "Provides academic support on complex topics." "Can be beneficial in professional settings for composing letters and emails where plagiarism is not monitored." "Engaging students in the process of reflection also offered a valuable learning opportunity, enabling them to comprehend both the advantages and limitations of the tool."
<b>Accountability Negative Comments</b>	"Lack of references to include in reports." "Provide inaccurate or bias information for research."
<b>Agency Positive Comments</b>	"Encourages collaboration by enticing students to work in teams." "Can be utilized for brainstorming ideas and as a problem-solving tool." "Could be used for language learning and as a virtual exchange partner to enhance language fluency."
<b>Agency Negative Comments</b>	"Become reliant on AI-generated content instead of engaging in critical thinking, problem-solving, and knowledge acquisition."
<b>Authenticity Positive Comments</b>	"To obtain accurate results, it is crucial to ask the right questions."
<b>Authenticity Negative Comments</b>	"Limits creativity and originality." "Increase plagiarism scores."

The responses can be further categorized as positive and negative for analysis by mapping the students' reflections to the AI Literacy model. On the positive side, application, accountability, and agency received the most student support, followed by authenticity. On the negative side, accountability received the most answers, followed by one answer each for the other categories. The model tested successfully based on the analysis. The students find value in applying AI-assisted writing to tasks permitted by the instructor. They also find value in decision-making and in adhering to equity and fairness, such as plagiarism checkers; however, the authenticity of inserting their human ideas to realize more robust communication needs more training and explanation. Authenticity only obtained one result. On the other hand, the negative reflections were equally distributed with one comment each except for accountability. The main concern in accountability is the need to include references to provide research validity and accuracy of those references.

By testing the model with students, the administration can find the areas needing improvement and the areas that can be the primary topics for AI policy building.

## **AI Governance in Education**

The debate about accepting ChatGPT in the classroom is ongoing. A conservative school of thought advocates changing how questions are asked in assignments to encourage a more profound learning experience and involve more personal reflection. AI is here to stay, and one of the challenges is to adopt these tools and leverage the positive aspects without forgoing the learning process. Education must consider how to incorporate AI to maximize its positive benefits. It is also essential to explicitly outline the positive expectations in the syllabus and engage in classroom discussions. Acknowledging that students may encounter varying expectations from different instructors is essential. Although everyone's initial impression of ChatGPT is limited, the results are significant. ChatGPT is impressive in answering questions, interpreting solutions to problems, generating essays, and writing program code, to name a few tasks.

Nonetheless, our limited observations show high potential. Because the technology is so new, one can only draw models or experiences within its current use. The knowledge base is concentrated on basic experimentation with the tool at the novice level. Many opinions converge to that conclusion.

The evaluation of ChatGPT's performance and ethics reveals several key findings (Green & Clayton, 2021). Most notably, the key findings in the literature align with the general impressions conveyed by the sample students in the class exercise.

First, generative AI tools such as ChatGPT can be helpful in various industries, including education. Students can use it to generate exam answers, and instructors can develop course content; however, its use raises ethical concerns, such as determining if the content from ChatGPT should be referenced or if machines can claim authorship. In terms of monitoring ethical use, plagiarism checkers will be able to detect AI-generated text and report the percentage borrowed.

Second, ChatGPT's intelligence is driven by machine learning and access to vast data, but it can generate both accurate and erroneous text called hallucinations. Deceptive intelligence poses challenges in assessing the reliability of its outputs. ChatGPT's natural language allows it to adapt to roles in business and society, triggering creative thoughts and leading to different roles in idea creation. Whether ChatGPT should possess general or specialized intelligence needs consideration, as both have advantages. Responsible use of ChatGPT is crucial due to its unique capabilities, and criteria should be developed to evaluate its outputs. The rapid diffusion of ChatGPT has implications for practice and policy, requiring organizations to adapt and update procedures (Cardon et al. 2023). It is crucial to address limitations such as lack of originality and vagueness in output and educate users about them. Developing regulations and policies for using AI-assisted writing tools are necessary, and international coordination is essential due to its global nature (Dwivedi et al. 2023). AI practitioners should be mindful of potential biases in ChatGPT and work to minimize them. Users should be aware of ChatGPT's limitations and be cautious when relying on its generated text.

Third, ChatGPT has significant promises and challenges. It can enhance productivity, but one must be vigilant of ethical, moral, and policy concerns (Dwivedi et al. 2023; Ray, 2023). The need for clear guidelines and ethical use for ChatGPT in the educational sector poses challenges, and revised policies are needed to address inconsistent practices and plagiarism. Due to legal limitations, schools struggle to penalize deliberate misuse or abuse of such tools. Therefore, new policies are necessary to govern AI-assisted writing in education. Additionally, international coordination is crucial to harness the benefits of global use and adoption. Generative tools present opportunities and challenges that require careful consideration of ethical, practical, and policy aspects (Liebrenz et al. 2023).

Fourth, Zhuo, et al. (2023) discuss that ChatGPT demonstrates superior accuracy and increased robustness compared to other language models; however, it is susceptible to hallucinations that can alter semantics. The issue of hallucination, where models generate false or misleading information, is observed in responses to open-ended questions, therefore indicating unreliable performance. According to Zhou, in terms of toxicity, ChatGPT exhibits minimal toxicity and demonstrates a reduction compared to other language models.

Similarly, Rahimi and Abadi (2023) propose that ChatGPT use in academic publishing raises ethical concerns due to uncertainty in establishing originality and accuracy. Language limitations and reliance on outdated sources limit its inclusivity and relevance. The likelihood of producing incorrect answers poses risks in fields like sciences. Improper use without human oversight can compromise reliable statements and diminish trust. Thus far, international guidelines emphasize human authorship only (Stokel-Walker,

2023). Rahimi and Abadi speculate on the impact of ChatGPT on publishing has yet to be fully understood because of the responsible use and human intervention to ensure integrity in academic publishing.

Overall, the evaluation highlights that ChatGPT is adaptable to work and academic environments, but there are unknowns concerning ethics, bias, reliability, hallucinations, and toxicity. While ChatGPT continues to progress in mitigating bias, there are still limitations and risks associated with AI-assisted writing.

Eventually, all organizations will require an AI policy for ethical considerations and safety. Specifically, schools must outline the student roles and responsibilities to ensure effective use in an AI-assisted writing use policy. The academic policy must support the school's mission, learning outcomes, and specific uses and violations. Faculty co-creation and concurrence are critical, including policy revisions to align to new uses, compliance, and exceptions.

Administrators must write the AI policy, which should be later approved by faculty and administrators. The general draft must disclose the policies, restrictions, accountabilities of faculty and student, and any information on violations and consequences and the escalation process. Each school should have one central policy, but it would have some variations depending on the discipline and faculty considerations. The syllabus should incorporate the policy for student guidance.

## Conclusions

Over time, researchers in computational linguistics, NLP, and AI have actively pursued advancements in language models, particularly in the context of speech recognition systems. Limited computational power and data availability constrained earlier language models. Those models needed more accuracy in capturing the sequence relationships between words in natural language (Scholtens, 2023). AI-assisted writing models still have biases and limitations. Agencies like the FTC and EU focus on protecting consumers from deceptive practices and risks associated with AI bias, privacy, security, and surveillance. At this point, it remains to be seen who is responsible for developing ethical policies across all users. Still, academics are leading in recognizing the need to formulate ChatGPT policies. AI-assisted writing revolutionizes education by offering personalized and on-demand support for students at all levels. It can make the learning experience more accessible and effective for students; however, it is essential to note that incorporating AI in education requires thoughtful consideration to balance leveraging its benefits and maintaining the value of learning.

The development of AI-assisted writing has yet to enter the maturing stage to establish its models and communities of practice. Ethical, political, and economic considerations are essential for acceptance and adoption. The literature suggests creating a division between assignments where AI is encouraged and where it is not beneficial to the student's development. For educational institutions, acknowledging AI literacy and gaining industry collaboration is fundamental to adapting and refining AI literacy models.

The study highlighted the recent development of ChatGPT and the introduction of the AI Literacy framework. It discussed the results of testing the model with students in higher education, indicating positive outcomes for writing skills and AI literacy. The study results present several recommendations for adopting ChatGPT in the classroom. Firstly, providing comprehensive training and resources to instructors and students is essential to utilize AI-assisted writing tools effectively. Secondly, educators should emphasize the importance of creating policies to support critical thinking and ethical considerations when using AI technologies. These recommendations are intended to assist in effectively integrating ChatGPT and promoting AI literacy among students. Ultimately, these discoveries highlight the practical application of AI-assisted writing in business communication education and the workplace, with particular emphasis on its relevance to Latin American countries.

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