

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

WHAT IS GENERATIVE AI?

Generative Artificial Intelligence (AI) represents a form of artificial intelligence capable of absorbing substantial datasets to imitate and generate various content forms like text, images, music, videos, code, and beyond, responding to inputs or cues. The University advocates for responsible exploration of Generative AI tools. However, users must be mindful of critical factors, including information security, data privacy, adherence to compliance standards, respect for copyright regulations, and upholding academic integrity.

Table of Contents

WHAT IS GENERATIVE AI?	1
GUIDANCE FOR THE USE OF AI TOOLS	2
RECOMMENDATIONS FOR EXPLORATION OF GENERATIVE AI TOOLS	4
LAMAR UNIVERSITY AND SELECTIONS OF PUBLICLY AVAILABLE GENERATIVE AI TOOLS FOR FACULTY AND STAFF*	6
BASICS OF “PROMPT-ENGINEERING” FOR TEXT-BASED GENERATIVE AI TOOLS	7
BASICS OF “PROMPT-ENGINEERING” FOR IMAGE-BASED GENERATIVE AI TOOLS	9
GUIDANCE FOR COMMUNICATIONS REGARDING GENERATIVE AI TOOLS IN SYLLABI	10
Guideline 1: Prohibition of Generative AI Tool Use	11
Guideline 2: Generative AI Tools Allowed in Specified Contexts with Attribution Acknowledged	12
Guideline 3: Encouragement of Generative AI Tool Use in Coursework.....	14
ACKNOWLEDGEMENT AND CITATION GUIDELINES:.....	16
GUIDANCE ON THE USE OF GENERATIVE AI IN HIGHER EDUCATION RESEARCH	17
MORE RESOURCES	20

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

GUIDANCE FOR THE USE OF AI TOOLS

Recommended platform: As Lamar University has evaluated Microsoft 365 systems for compliance, Microsoft Copilot is the current recommended text-based generative AI platform for use by Lamar University staff and faculty. Navigate to copilot.microsoft.com and log in using your LEA credentials (user@Lamar.edu), where you will be directed to our Duo two-factor authentication. Once logged in, you will see the Lamar University logo in the top left corner, indicating you are logged in appropriately through the university system. You will note a comment above the input box stating, “your personal and company data are protected in this chat.” This comment does not mean that you may enter any information freely. Rather, the guidance on allowable and prohibited use below should still be followed. To learn more about data, privacy and security provided by Microsoft Copilot, review information here: <https://learn.microsoft.com/en-us/microsoft-365-copilot/microsoft-365-copilot-privacy>.

Review generated content before use: Generative AI works to provide the “most likely response,” not the most truthful. For this reason, generated content must be critically evaluated. AI-generated content can be inaccurate, misleading, or entirely fabricated (sometimes called “hallucinations”) or may contain copyrighted material. You, not LU, are responsible for any content that you publish that includes AI-generated material.

Existing and Updated Policy:

Review all relevant handbooks and policies. Adhere to existing policies and procedures and be mindful as they update. In the meantime, faculty should be clear with students they are teaching and advising about their policies on permitted uses, if any, of Generative AI in classes and on academic work. Students are also encouraged to ask their instructors for clarification about these policies as needed. See guidance on syllabi statements later in this document.

Allowable Use:

Data Utilization:

- Publicly available or published university information (Green Category) can be freely used in AI Tools.
- Usage should align with the Data Governance Policy.

Examples of Published Data:

- Research data (at the discretion of the data owner)
- Information available on Lamar University’s website without eID authentication
- Policy and procedure manuals designated as public

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- Job postings
- University directory information
- Information in the public domain
- Publicly available campus maps

Prohibited Use:

Data Restrictions:

- ChatGPT or similar AI Tools cannot be used with personal, confidential, proprietary, or sensitive information unless under a university contract specifically protecting such data.

Examples of Controlled Data:

- Employee names
- Salary information
- Performance review details
- Unpublished research data (at the discretion of the data owner)
- Non-public LU policies and policy manuals
- Internal memos and emails

Examples of Confidential Data:

- Social Security numbers
- Access device numbers
- Biometric identifiers
- Date of birth
- Driver's license numbers
- Passport and visa numbers
- Personal vehicle information
- Financial information (credit card numbers, account numbers, etc.)
- Information pertaining to legal affairs or institutional relations
- Contracts
- User account passwords
- Health information, including Protected Health Information (PHI)
- Export controlled information
- Details about LU infrastructure (engineering, design, and operational information)

Output Restrictions:

- AI Tools must not be used to generate non-public content, including proprietary or unpublished research, legal analysis, recruitment decisions, completion of academic work not allowed by the instructor, non-public instructional materials, and direct grading.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

Illegal or Fraudulent Activities:

- AI Tools must not be used for any activity that is illegal, fraudulent, or violates state, federal, LU, or TSUS policies.

Be vigilant: Generative AI has made it easier for malicious actors to create sophisticated phishing emails and “deepfakes” (i.e., video or audio intended to convincingly mimic a person’s voice or physical appearance without their consent) at a far greater scale. Continue to follow the guidance provided in the annual “Security Awareness” training (see HR Training Nest) and report suspicious messages following these procedures: <https://www.lamar.edu/it-services-and-support/security/awareness/report-phish.html>.

RECOMMENDATIONS FOR EXPLORATION OF GENERATIVE AI TOOLS

Lamar University encourages responsible exploration with Generative AI tools, fostering innovation while ensuring adherence to guidelines and considerations unique to such experimentation. Below are potential avenues for experimentation and key factors to consider before delving into Generative AI. For more ideas, contact the CTLE at CTLE@Lamar.edu.

Before Experimentation with Generative AI Tools

- Familiarize yourself with Lamar University's preliminary guidelines for utilizing Generative AI tools above. Ensure compliance with regulations regarding using confidential data with publicly accessible tools. Verify and authenticate any AI-generated content before dissemination.
- Explore available tools at Lamar University, examining their approved data handling levels. Continuous updates may introduce new options for experimentation. Certain Colleges may provide additional tools for eligible users.
- Acknowledge the limitations of AI. Approach critically, acknowledging potential inaccuracies, misleading information, or entirely fabricated content. Maintain skepticism and verify the validity of AI-generated output.
- Respect copyright regulations. Ensure that AI-generated content does not infringe upon the intellectual property or legal rights of third parties. Avoid requesting AI to replicate copyrighted material.

Ideas for Experimentation with Generative AI

- **Content Creation:** Generate diverse content forms like stories, music, images, recipes, and more through natural language prompts, fostering creativity and idea generation. Emphasize learning to refine and optimize prompts for effective outcomes.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

- **Code Generation and Debugging:** Utilize Generative AI to create, debug, and enhance computer code, catering to both experts and non-programmers. Review code for security vulnerabilities and accuracy before publication.
- **Formula Creation for Spreadsheets:** Simplify formula creation for spreadsheet applications using natural language prompts, enhancing accessibility for non-experts. Verify generated formulas for accuracy before integration.
- **Advanced Search:** Leverage Generative AI's ability to swiftly navigate vast datasets for advanced search purposes. Exercise caution regarding the accuracy of outputs, considering potential biases and outdated information.
- **Document Summarization:** Employ Generative AI for concise document summarization, facilitating tasks such as research insights extraction and report condensation. Verify summaries for contextual accuracy.
- **Information Synthesis and Translation:** Utilize AI to synthesize complex datasets and translate text passages efficiently. Exercise caution with translations, ensuring accuracy particularly when translating into languages other than English.
- **Content Review and Enhancement:** Utilize AI for editing and improving written content, offering suggestions for enhancements, error detection, and readability assessment.
- **Productivity Enhancement:** Harness AI's capabilities to summarize meeting notes, identify key points, and generate action items, enhancing productivity in various tasks.
- **Accessibility Improvement:** Employ AI tools to enhance accessibility by identifying document issues and suggesting improvements such as alt-text and audio descriptions. Manually test content for accessibility to ensure effectiveness.

Lamar University remains committed to supporting responsible exploration and innovation with Generative AI tools, fostering a culture of ethical and informed experimentation within its academic community.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

LAMAR UNIVERSITY AND SELECTIONS OF PUBLICLY AVAILABLE GENERATIVE AI TOOLS FOR FACULTY AND STAFF*

*Note: The list is not exhaustive. Some tools may not be available to all faculty and staff. For information on other available generative AI tools, contact CTLE@Lamar.edu.

Text-Based Tools: These applications are engineered to comprehend and produce responses akin to human language when prompted with text-based, natural language cues. They possess the capability to generate text and code, facilitate language translation, compose various forms of creative content, and engage in conversational interactions by responding to inquiries.

Microsoft Copilot (Formerly Bing Chat)

Publicly available, but when logged in with LEA username, additional privacy and security measures. Recommended for use. Only publicly available data should be input without higher permissions.

Chat GPT (OpenAI)

Publicly available. Only publicly available data should be input.

Google Gemini (Formerly Bard)

Publicly available. Only publicly available data should be input.

Image-based Tools: These tools empower you to produce images and text effects effortlessly by inputting keywords or descriptions through natural language prompts.

Adobe Firefly

Available through Lamar University's Adobe Creative Cloud license.

Adobe Express

Available through Lamar University's Adobe Creative Cloud license.

Canva

Publicly available. AI tools within their Magic Studio and AI-related applications.

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Learning Management System (LMS)-based Tools: These tools improve faculty workflow in course design.

Anthology's AI Design Assistant (Blackboard Learn Ultra)

Available through Lamar University's Anthology Blackboard license. For more information contact CTLE@Lamar.edu

AI Design Assistant can help with:

- *Simplifying Course Creation*
- *Content-based Assessment Generation*
- *Rubric Creation*
- *Royalty-free Image Sourcing*

A plethora of other Generative AI tools are available.

For assistance in selecting and ensuring appropriate use of generative AI tools, contact the CTLE at CTLE@Lamar.edu. Should the tool you are interested in utilizing require IT Compliance Review, the CTLE will redirect you to that office before proceeding with any assistance or training.

BASICS OF "PROMPT-ENGINEERING" FOR TEXT-BASED GENERATIVE AI TOOLS

The inputs you provide, known as prompts, wield significant influence over the quality of outputs produced by Generative AI tools. These prompts serve as the foundation upon which the AI model generates responses, drawing from the patterns ingrained during its training. Crafting descriptive and precise prompts enhances the quality of generated content.

Overview for Generating Better Prompts:

1. **Be Specific:**
 - Generic prompts yield generic results. Specify the type, genre, audience, and desired attributes to refine outputs.
 - Avoid ambiguity to minimize the risk of inaccurate responses.
2. **"Act as if..." Approach:**
 - Task the AI to embody a specific role or perspective, guiding its responses accordingly.
 - For instance, contextualizing a recipe request as if consulting a personal trainer may yield healthier meal suggestions.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

3. **Specify Output Presentation:**

- Define the desired output format explicitly, whether it's code, stories, reports, dialogue, or images.
- Incorporate phrases like "Present this in the form of..." to clarify expectations.

4. **Utilize "Do" and "Don't" Directives:**

- Outline preferences and exclusions within your prompts to streamline the process and improve outcomes.
- Specify desired elements and avoid undesired components for clarity.

5. **Provide Examples (Without Infringement):**

- Offer sample sentences or paragraphs as reference points for desired output, ensuring originality and avoiding copyright issues.

6. **Consider Tone and Audience:**

- Specify the intended audience and desired tone to tailor responses accordingly.
- Provide context to refine outputs, such as the tone for a best man's speech suitable for a family audience.

7. **Build on Previous Prompts:**

- Evolve prompts incrementally by refining wording, tone, or adding context over iterations to guide AI toward desired outputs.

8. **Offer Feedback and Corrections:**

- Engage with AI as a collaborator, providing feedback on the usefulness of outputs and correcting any mistakes for improved results.

9. **Solicit Prompt Assistance:**

- Seek AI's assistance in crafting prompts or identifying additional requirements to enhance output quality.
- Encourage AI to suggest improvements or clarify necessary inputs for optimal results.

Additional Resources:

For further exploration and guidance on utilizing Generative AI tools effectively, consult the CTLE at CTLE@Lamar.edu. Continuously updated guidance will reflect evolving practices and insights gained from AI utilization across various domains.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

BASICS OF “PROMPT-ENGINEERING” FOR IMAGE-BASED GENERATIVE AI TOOLS

Similar to text-based AI tools, image generation tools like Adobe Firefly and Express rely heavily on the prompts users provide to create high-quality images. After you input a prompt, the AI model analyzes your instructions and generates a response based on its learned patterns. Utilizing more descriptive prompts can notably enhance the quality of the outputs. This guide offers a fundamental overview of how to generate prompts for image-based AI tools.

Before diving into image-based AI tools for your Lamar University projects, it's crucial to review the university's guidelines. It's important to note that AI image tools can vary greatly in quality and may produce offensive content. Therefore, meticulously review any work containing AI-generated content before utilizing or publishing it. Pay special attention to copyright issues associated with AI-generated images. Adobe Firefly and Express, for example, are trained on Adobe Stock images, openly licensed content, and public domain materials, ensuring compliance with copyright laws. For this reason, we recommend

Lamar University faculty, students, and staff utilize Adobe Firefly or Express for AI image experimentation.

Consider AI's limitations

Just as text-based AI tools can "hallucinate," image-based tools may introduce peculiar artifacts into images, especially when dealing with people or places. Watch out for anomalies such as odd expressions on faces, distorted body shapes, extra fingers on hands, or incongruous elements in particular settings.

Getting started with image prompts

A simple formula of "subject + style + details + output format" will guide you in creating AI images. Continuously add more detail to refine your results.

Describe the subject in detail

For instance, instead of requesting "draw a dog," which might result in generic outcomes, provide specifics: "Create an image of a brown Labrador retriever happily playing fetch in a grassy park."

Specify the style of the image

Generative AI can produce images in various styles, including photographs, paintings, cartoons, and more. Specify your desired style to refine the output: "Draw a brown Labrador retriever happily playing fetch in a grassy park, in the style of a watercolor painting."

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

Add more details and refine

Consider aspects like lighting, composition, background details, and color schemes to enhance the image: "Create an image of a brown Labrador retriever happily playing fetch in a grassy park, in the style of a watercolor painting, with the late afternoon sun casting long shadows across the green fields."

Include your preferred output format

Specify how you want the image to be presented, such as orientation or intended use, like a poster or social media post: "Generate an image of a brown Labrador retriever happily playing fetch in a grassy park, in the style of a watercolor painting, with the late afternoon sun casting long shadows across the green fields, suitable for use as a poster."

Firefly and Express also offer a sidebar enabling users to toggle various elements like effects, style, lighting, and composition.

Learn more about getting started with Firefly or Express or find additional tips on creating effective prompts from [Adobe](#). Need more assistance? Contact the CTLE at CTLE@Lamar.edu.

GUIDANCE FOR COMMUNICATIONS REGARDING GENERATIVE AI TOOLS IN SYLLABI

Introduction: Generative artificial intelligence (generative AI) tools, such as ChatGPT, have recently become widely available. While these tools offer inspiration and new possibilities, it is crucial to recognize that they should not serve as unacknowledged substitutes for the content created by students in their courses.

University Policy: No changes in university policy are required regarding the potential use of generative AI tools. Representing work not done by the student as their own is already a policy violation, and this includes work generated by an AI system that is not properly credited. Clear limitations on the use of these tools exist within LU's acceptable use policy. Instructors have the discretion to explore these tools in the classroom, and the Center for Teaching and Learning Enhancement (CTLE) recommends that faculty decide whether these tools align with their pedagogical aims before allowing or disallowing use. Further, CTLE recommends that instructors clearly state their course policies in a designated section of their syllabi.

Pedagogical Considerations: If adopted, students should learn how to use AI text generators, such as ChatGPT, to enhance their abilities as writers, coders, creators, and thinkers. It is essential to ensure equitable access to these tools and establish fair grading policies and student evaluation criteria for both those who use AI tools and those who do not in their courses.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

Syllabus Statements: The following suggested syllabus statements regarding generative AI tools in the classroom are derived from CTLE discussions and public web resources. Each section contains various ways to frame the instructor's intent. Due to the nuanced nature of generative AI, these categories do not stand alone, and there may be areas of overlap. The statements are intended to inspire instructors to think critically about their use of generative AI tools in their courses. Instructors are encouraged to use, edit, or adapt any of the provided selections based on their specific needs. For further guidance on crafting statements, instructors can contact the CTLE and explore additional AI information available through the CTLE. Email CTLE@Lamar.edu for any assistance you may need.

Guideline 1: Prohibition of Generative AI Tool Use

Approach: Total Prohibition

1. Policy Statement:

- **Prohibition:** Generative AI tool use is strictly prohibited in this course.
- **Faculty Note:** In adopting this approach (total prohibition), faculty should ensure that assignments are designed to resist AI influence. Additionally, faculty members must be prepared to discuss the ethical considerations and implications of AI tool use.

2. Detailed Course Policy:

- This course assumes that all work submitted by students, including process work, drafts, brainstorming artifacts, and final works, will be independently generated by the students themselves, either individually or as directed by assignment instructions.
- **Policy Violations:** The following actions constitute violations of academic honesty:
 - Having another person or entity complete a substantive portion of a graded assignment.
 - Purchasing work from a company.
 - Hiring a person or company to complete an assignment or exam.
 - Using generative AI tools, such as ChatGPT.

3. Plagiarism Consequences:

- Any use of generative AI tools for any part of the work will be treated as plagiarism. See student handbook regarding possible consequences of violations of academic honesty.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

- **Clarification:** If students have questions regarding what constitutes a violation of this policy, they are encouraged to contact the instructor as soon as the question arises.

4. Emphasis on Skill Development:

- All assignments, encompassing student-based brainstorming to project development, must be fully prepared by the student.
- **Rationale:** Developing competencies in the skills associated with this course prepares students for success in their degree pathway and future careers.
- **Strict Prohibition:** The use of generative AI tools to complete any aspect of assignments for this course is not permitted and will be treated as plagiarism.
- **Student Queries:** If students have questions about the policy, they are encouraged to contact the instructor for clarification.

Guideline 2: Generative AI Tools Allowed in Specified Contexts with Attribution Acknowledged

Approach: Permitted Use with Attribution

1. Policy Statement:

- Generative AI tools, such as ChatGPT and DALL-E, are allowed in specified contexts with attribution acknowledged.
- **Faculty Note:** Faculty should design assignments resistant to AI influence where AI use is not permitted. Integration of AI into course activities and assessments is encouraged, and faculty should be prepared to offer advice on AI use for assignments allowing it. Ethical considerations and implications of AI tool use should be discussed.

2. Encouragement for AI Use:

- The course recognizes the potential of generative AI tools for brainstorming, exploring responses, and creative engagement with materials.
- **Faculty Support:** While direct engagement with the instructor is irreplaceable, the potential for generative AI tools to provide automatic feedback and assistive technology is acknowledged.
- **Pre-Assignment Discussion:** Students are encouraged to contact the instructor well in advance of assignment due dates to discuss the acceptability of using generative AI tools.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

3. Attribution Requirement:

- Students must give credit to AI tools when used, even if only for generating ideas.
- **Appendix Requirement:** Assignments involving AI tools must include an appendix highlighting the relevant sections, specifying the AI tools used, explaining how they were used, and providing reasons for their use.
- **In-Class Prohibition:** AI tools are not permitted during in-class examinations or assignments unless explicitly allowed and instructed.

4. University Policy Reminder:

- It is a violation of university policy to misrepresent work by not acknowledging the use of generative AI tools.
- **Instructor Inquiry:** Students are encouraged to reach out to the instructor with any questions about the use of generative AI tools before submitting content influenced by these tools.

5. Instructor-Guided AI Use:

- Generative AI tools, such as ChatGPT, may be used under specific guidelines provided by the instructor.
- **Transparency:** Students will be informed about when and how these tools will be used, along with guidance on attribution if needed.
- **Plagiarism Warning:** Any use of generative AI tools outside of these parameters constitutes plagiarism and will be treated accordingly.

6. Skill Development Emphasis:

- Understanding when and how to use generative AI tools is considered an important skill for future professions.
- **Responsibility:** Students are welcome to use generative AI tools in alignment with learning outcomes, with full responsibility for submitted work, properly documented, and cited.

7. Integrity Assurance:

- Students are not permitted to submit text generated by AI systems for any classwork or assessments.
- **Scope of Prohibition:** This includes answers to assignments, exams, projects, or any other course-related tasks.
- **Permitted AI Use:** AI may be used for research and preparation but must be appropriately revised, expanded, or cited by the student.
- **Evaluation Awareness:** Students should critically evaluate AI systems' benefits and limitations. Violations will be treated as academic misconduct, and students are encouraged to seek clarification on AI use.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

Guideline 3: Encouragement of Generative AI Tool Use in Coursework

Approach: Encouraged Use with Attribution

1. Policy Statement:

- Students are encouraged to use generative AI tools for certain tasks, with clear attribution requirements.
- **Faculty Note:** Faculty should actively integrate AI into course activities and assessments, or at least be prepared to provide guidance on AI use. Ethical considerations and implications of AI tool use should be discussed.

2. Task-Specific AI Use:

- Students are encouraged to use AI tools for brainstorming assignments or projects and for revising existing work.
- **Attribution Expectation:** Clear attribution of AI-generated text is expected upon submission. Options include using a different colored font, quoting directly in the text, or using in-text parenthetical citations.

3. Creative Process Integration:

- AI-content generation tools are permitted and considered a normal part of the creative process in this course.
- **Requirements for Use:**
 - For each assignment, students must include a paragraph explaining the AI content-generation tool used, dates of use, and prompts used, following the MLA style guide.
 - During critique, students must describe precedents used and how source content was transformed. When presenting AI-generated images or content, proper citation following the MLA style guide is required.
- **Academic Dishonesty Warning:** Neglecting to follow these requirements may be considered academic dishonesty.

4. AI Platforms for Preparation and Revision:

- Students are invited to use AI platforms to prepare for assignments and projects, including brainstorming and obtaining a sense of a completed essay.
- **Revision and Editing:** AI tools can be used for revising and editing work, such as identifying flaws in reasoning, improving paragraphs, or fixing citations.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

- **Clear Identification Requirement:** When submitting work, students must clearly identify any writing, text, or media generated by AI.
 - **Submission Details:** Parts of essays generated by AI should appear in a different colored font, and the relationship between these sections and student contributions should be discussed in cover letters accompanying essay submissions.
 - **Collaborative Assistance:** If students need help referencing their creative work, they are encouraged to contact the instructor for collaboration.
5. **Instructor Collaboration and Ethical Considerations:**
- Faculty members should actively integrate AI into course activities and assessments, providing advice on AI use in the course.
 - **Ethical Discussion:** Instructors should be prepared to discuss ethical use and implications of AI tool use with students.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

ACKNOWLEDGEMENT AND CITATION GUIDELINES:

In considering the integration of generative AI tools, instructors are encouraged to explore these tools thoughtfully and reflect on how to properly acknowledge and cite content derived from them. This extends to understanding the role of citation within student work, encompassing aspects like brainstorming, argument development from sources, alignment of AI tool output with authorship, and more.

Only publicly available information should be used in AI prompts or other inputs. It is essential to contemplate the shareable or retrievable nature of any AI-informed work. Instructors should emphasize to students that these tools are not to be used for creating content intended to be private (e.g., for research purposes) or claimed as their intellectual property.

To assist instructors in crafting language for syllabi and assignments, the following commonly used style guides are recommended as valuable resources. These guides provide essential frameworks for ensuring proper acknowledgment and citation practices when incorporating content generated through AI tools. Contact LU's Writing Center for further guidance.

Generative AI Citations:

MLA: <https://style.mla.org/citing-generative-ai/>

APA: <https://apastyle.apa.org/blog/how-to-cite-chatgpt>

Chicago:

<https://www.chicagomanualofstyle.org/qanda/data/faq/topics/Documentation/faq0422.html>

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

GUIDANCE ON THE USE OF GENERATIVE AI IN HIGHER EDUCATION RESEARCH

Generative AI is a transformative technology reshaping the landscape of higher education, particularly in teaching and research. In the realm of research, policies, and guidelines governing the application of AI, particularly in the creation and evaluation of manuscripts, papers, and grant proposals, are undergoing continuous evolution across federal agencies, academic journals, and educational institutions. The responsibility lies with investigators, project staff, and students to stay informed about the pertinent policies and guidelines related to the utilization of AI programs and tools. It is essential to critically assess the reliability of these tools within the research environment (NIH, 2023).

Researchers, project staff, and students engaging in AI-driven research activities must navigate evolving policies and guidelines. The following guidelines address key aspects of AI application in research:

1. AI as an Author:

- **No AI Authorship:** Consensus exists among journals and research communities that AI models cannot be listed as authors. AI models are ineligible for authorship recognition due to their inability to fulfill the necessary requirements. As non-legal entities, they lack the capacity to assume responsibility for submitted work, assert the presence or absence of conflicts of interest, or effectively manage copyright and license agreements (Committee on Publication Ethics [COPE], 2023, Zielinski et al., 2023; Flanagan et al., 2023). The notion of 'responsibility' extends beyond ownership, encompassing accountability as well. Generative AI cannot be acknowledged as an author since any attribution of authorship inherently entails accountability for the work, a responsibility that AI tools are incapable of assuming (Nature, 2023; Hosseini, Rasmussen & Resnik, 2023). Accountability, serving as a fundamental aspect of authorship, signifies liability and answerability for the produced work.

2. AI in Manuscript Writing:

- **Transparency Requirements:** Authors using AI tools in writing, data analysis, or producing graphical elements must transparently disclose the AI tool's usage in the Materials and Methods section.
- **Responsibility for Outputs:** Authors are accountable for ensuring AI-generated outputs are appropriate, accurate, and allowable by the publishing entity. Review and editing are crucial, as AI may produce authoritative sounding but potentially incorrect, incomplete, or biased content, also sometimes called "hallucinations."

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

- Distinct journals and research fields impose varied requirements on the incorporation of AI in the writing process. Broadly, it is emphasized that "authors utilizing AI tools in manuscript composition, production of images or graphical elements, or in data collection and analysis must exhibit transparency by disclosing, in the Materials and Methods (or equivalent section) of the paper, the manner and specifics of AI tool utilization" (COPE, 2023; Zielinski et al., 2023; Flanagan et al., 2023). Authors bear the responsibility of ensuring the appropriateness and accuracy of AI-generated outputs. It is stressed that "authors should meticulously review and edit the outcomes as AI has the potential to generate authoritative-sounding output that may be inaccurate, incomplete, or biased" (International Committee of Medical Journal Editors [ICMJE], 2023; Hosseini, Rasmussen & Resnik, 2023).

3. Citation of AI in Manuscripts:

- **Avoiding Plagiarism:** Authors must take steps to avoid plagiarism in AI-generated text and images. Proper citation and attribution of quoted material are essential.
- **Citing AI Models:** When using AI models like ChatGPT, authors should cite the model's developer (e.g., OpenAI) rather than the AI itself. APA style guidelines for citing AI are available.
- Adhering to ICMJE standards, authors are urged to take precautions against plagiarism in AI-generated text and images (2023). Proper citation and attribution of any quoted material from AI-generated content are emphasized (ICMJE, 2023). In general, the AI model itself should not be acknowledged as the author of the quoted text. For instance, in the case of using the AI model ChatGPT, the credited author should be specified as the model's creator, OpenAI.

4. Copyright and Patent Considerations:

- It is important to note that 'the United States Patent and Trademark Office (USPTO, 2024) has determined that only natural persons can be named as inventors,' thereby excluding generative AI from being designated as an inventor. Relying solely or significantly on generative AI for the creation or contribution to an invention might potentially hinder the ability to secure patent protection or be recognized as an inventor, as the latter requires substantial intellectual contribution from a human inventor.

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

5. Use of AI in Grant Applications:

- **Similar Concerns:** Concerns applicable to manuscript writing also extend to grant applications. Funding agencies hold applicants accountable for any AI-produced content that may introduce plagiarism, falsification, or fabrication.
- Several of the issues associated with utilizing AI in the creation and development of manuscripts, as outlined earlier, are similarly pertinent to the realm of crafting grant applications. Grant applications are presumed to encapsulate the authentic and precise concepts of the applicant institution and researchers. Nevertheless, given the propensity of AI tools to potentially introduce plagiarized, falsified, and fabricated content, caution is advised for grant applicants regarding any content produced by AI. It is explicitly cautioned that funding agencies will hold applicants responsible for any instances of plagiarized, falsified, or fabricated material, constituting research misconduct (Lauer, Constant, & Wernimont, 2023).

5. AI in the Peer Review Process:

- **NIH Prohibition:** The National Institutes of Health (NIH, 2023) prohibits the use of AI in scientific peer reviews for grant applications and R&D contract proposals. Utilizing AI in the peer review process is considered a breach of confidentiality because these tools “have no guarantee of where data are being sent, saved, viewed, or used in the future” (NIH, 2023). Using AI tools to help draft a critique or to assist with improving the grammar and syntax of a critique draft is still considered a breach of confidentiality. For this reason, LU does not advise of AI use in the peer review process without explicit permission from the applicable organizations.

6. Reporting AI Use in Research:

- **Reproducibility Standards:** Rigorous and reproducible research is emphasized. Transparent and complete reporting of AI methodology and materials used is crucial for promoting reproducibility and replicability. Refer to the Association of the Advancement of Artificial Intelligence's reproducibility checklist found here: <https://aaai.org/conference/aaai/aaai-23/reproducibility-checklist/>.

Conclusion: Researchers using AI in higher education must adhere to evolving policies, ensuring responsible use and accountability for the outputs. The guidelines provided aim to foster transparency, integrity, and ethical conduct in AI-driven research activities.

References

Committee on Publication Ethics [COPE]. (2023, February 13). *Authorship and AI Tools – COPE: Committee on Publication Ethics*. Retrieved June 14, 2023, from [here](#).

Lamar University Guidance on Generative AI Use from the Center for Teaching and Learning Enhancement

Flanagin, A., et al. (28 February 2023). Nonhuman “authors” and implications for the integrity of scientific publication and medical knowledge. *JAMA* 329(8), 637-639.

Hosseini, M., et al. (2023). Using AI to write scholarly publications. [Accountability in Research](#).

International Committee of Medical Journal Editors [ICMJE]. (2023, May). *Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals*. ICMJE – Recommendations. Retrieved June 14, 2023, from [here](#).

Lauer, M., Constant, S., & Wernimont, A. (2023, June 23). *Using AI in peer review is a breach of confidentiality*. Retrieved July 12, 2023, from [here](#).

National Institutes of Health [NIH]. (2023, June 23). *NOT-OD-23-149: The Use of Generative Artificial Intelligence Technologies is Prohibited for the NIH Peer Review Process*. Retrieved June 25, 2023, from [here](#).

Nature (2023, January 24). *Tools such as ChatGPT threaten transparent science; here are our ground rules for their use*. Retrieved July 10, 2023, from [here](#).

United States Patent & Trademark Office. (2024, January 24). 2109 Inventorship [R-07.2022]. Retrieved January 23, 2023, from [here](#).

Zielinski, C., et al. (2023, May 31) Chatbots, ChatGPT, and scholarly manuscripts: WAME recommendations on Chatbots and generative artificial intelligence in relation to scholarly publications. Retrieved July 10, 2023, from [here](#).

MORE RESOURCES

Coming soon. Check back on CTLE’s webpage (<https://www.lamar.edu/ctle>) for the new Artificial Intelligence section soon!

Note: This guidance was created by the Center for Teaching and Learning Enhancement and approved by Lamar University’s Digital Learning Committee with input with various university community stakeholders for distribution.