Prompt Construction for Generative AI: Getting Started

An effective way to understand how to utilize technology such as ChatGPT or Google Bard is to engage in experiential, hands-on exploration of the tools. The CETL has provided some guidelines to help instructors explore and effectively utilize generative AI. One of the critical components of using generative AI is effectively writing prompts. To begin this process, we must understand the key components of an effectively written prompt.

Component Zero: Data
Before submitting student work to generative AI tools such as chatbots (e.g., generating draft feedback on student work) or utilizing tools like Zoom's AI Companion, instructors must adherence to FERPA guidelines. Proper de-identification under FERPA necessitates the removal of all personally identifiable information and a reasonable determination by the institution that a student's identity is not personally identifiable. Depending on the assignment's nature, student work may contain identifiable information if it describes personal experiences that must be removed before it can be considered properly de-identified. Institutional tools should be used, and free account for services should never be utilized for any content or data that could lead to students identity.

Component One: Task

Clearly defining the task helps guide the model in understanding the goal or objective of the user. Be explicit about the desired outcome. Specify the length, tone, or any specific elements you want included. Clearly state if the response should be in the form of a narrative, code, or any other specific format.

Example: "***Develop*** a set of interactive learning modules for a higher education course on data science, ensuring a balance between theoretical concepts and practical applications."

Component Two: Context

Providing context sets the stage for the task, offering background information that shapes the model's understanding. Offer relevant details such as setting, logistics, or any pertinent information that aids comprehension. Focus on essential contextual elements directly related to the task at hand. Consider the relevance of time, place, and characters to the higher education context.

Example: "***Within a university faculty meeting***, discuss the challenges faced by educators when integrating project-based learning into STEM curricula at the

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undergraduate level."
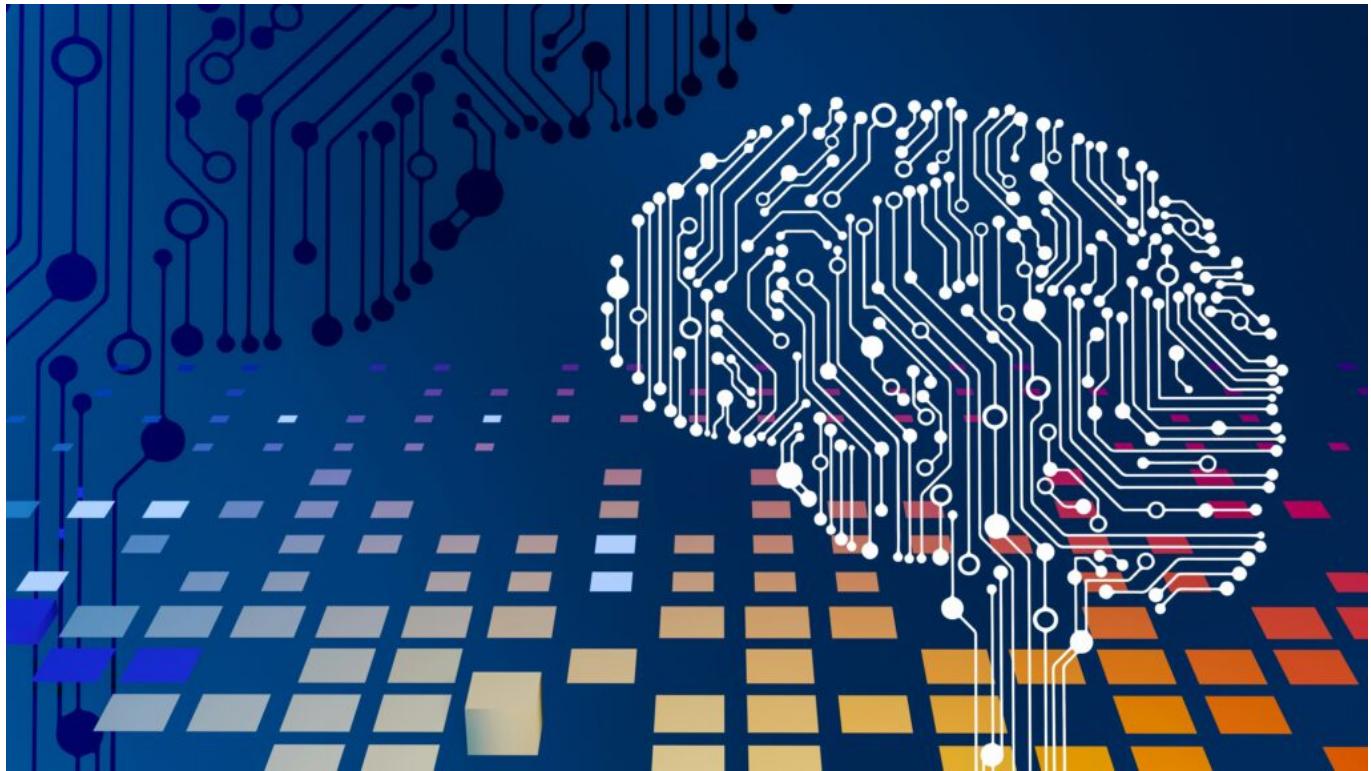
Component Three: Domain-Specific Knowledge

Including domain-specific knowledge helps the model generate responses with a better understanding of a particular field or topic. Specify any specialized information or terms relevant to the task, guiding the model to use domain-specific language. Clearly specify any terms, concepts, or theories relevant to the higher education or teaching and learning context. If using acronyms or abbreviations, ensure you define them within the prompt or provide a context clue.

Example: "Explain **the key principles of Universal Design for Learning (UDL)** and suggest practical strategies for its implementation in a higher education psychology course."

Component Four: Input (Frameworks, Formatting, Specific Content)

Guiding the input structure aids in obtaining responses that align with a particular format or style. Provide details on formatting preferences, mention any frameworks or structures to follow, or specify the type of content expected. If applicable, suggest a logical flow for the information or content. Consider providing examples of the desired format or structure to serve as a guide.

Example: "Develop a **comprehensive syllabus outline** for a graduate-level business ethics course, ensuring alignment with the principles of constructive alignment and including assessment strategies that promote critical thinking **using the following template**."

Additional Foci for Effective Prompt Construction

Act as: Indicate a role or perspective to adopt (e.g., expert, critic, enthusiast).

Audience: Specify the target audience for tailored content.

Best practices: Ask the AI to provide best practices or guidelines on a subject.

Case studies: Request referencing relevant case studies or real-world examples.

Citations: Request the inclusion of citations or sources to support information.

Comparison: Ask the AI to compare different ideas or concepts.

Confidentiality: Specify confidentiality requirements or restrictions.

Ethical considerations: Mention ethical guidelines to follow.

Examples: Provide examples of desired style, structure, or content.

FAQs: Ask the AI to generate a list of frequently asked questions (FAQs).

Format: Define the format or structure (e.g., essay, bullet points, outline, dialogue).

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Formatting: Specify desired formatting elements (e.g., headings, subheadings, lists).

Future implications: Encourage discussing potential future implications or trends.

Hypothetical scenarios: Encourage exploration of hypothetical scenarios.

Keywords: List important keywords or phrases to be included.

Language: Indicate the language for the response, if different from the prompt.

Limitations: Specify constraints, such as word or character count.

Objective: State the goal or purpose of the response (e.g., inform, persuade, entertain).

Personalization: Request personalization based on user preferences or characteristics.

Problem-solving: Request solutions or recommendations for a specific problem.

Quotes: Request the inclusion of relevant quotes or statements from experts.

Revision requirements: Mention revision or editing guidelines.

Summary: Request a summary of a longer piece of content.

Terminology: Specify industry-specific or technical terms to use or avoid.

Timelines: Ask the AI to provide a timeline of events or developments.

Tone: Specify the desired tone (e.g., formal, casual, informative, persuasive).

This reference was developed with the assistance of Chat-GPT.