9-9-2024

Exploring Generative AI as a "Study Buddy" for Research Methods in Psychology

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Exploring Generative-AI as a "Study Buddy"

Purpose: The purpose of this assignment is to engage with generative artificial intelligence (genAI) as a study tool and to explore how genAI output differs based on the platform used and prompts entered.

Prior Preparation: Prior to completing this assignment, you were asked to read two book chapters about research methods in psychology and to submit a reaction paper based on that material. Some components of this assignment ask you to draw upon information from those book chapters.

Overview: Working together as a group, you will use a genAI tool to identify and define terminology and concepts from research methods in psychology. You will also use your background knowledge from the assigned book chapters and previous coursework to evaluate the accuracy and utility of the AI-generated content. To complete this assignment, you are expected to utilize a text-based genAI tool, such as ChatGPT or Gemini.

Directions: Complete the steps outlined below and answer the questions that follow. You may type directly into this document or submit your answers as a separate document. You will submit one assignment per group.

1. Each person in your group should open the genAI tool of their choice and enter the following prompt:

   "Provide some terms and definitions used in research methods in psychology".

   Compare and contrast the responses you received with each other. How many terms and definitions were generated? Did you all receive the same terms and definitions? Do you notice any differences in the content generated? Briefly describe some of these differences.

2. Each person in the group should modify and re-enter the prompt. Examples of modified prompts appear below. You are free to choose one of these prompts or create your own.
   o "What terms should I know for research methods?"
   o "What terms and concepts are included in research methods in psychology?"
   o "What are the most common definitions used in research methods in psychology?"
   o "Provide the most common terms used in research methods in the social sciences."

   How did modifying the prompt change the material generated?

3. Each group member should further modify the prompt to ask for more complex information. Examples of modified prompts appear below. You may use one of these prompts or create your own.
   o "Define the most common terms in research methods in psychology and explain why

they are important."
- o "What are the most difficult concepts to understand in research methods in psychology?"
- o "Identify the most common terms in research methods in psychology and explain why students may find these concepts difficult."

How did the AI-generated content differ from content generated from previous prompts? Is the material generated here more (or less) helpful than previous prompts? How so?

4. As a group, identify one concept from the AI-generated material (from any of the previous steps) that you find difficult to understand, and ask for clarifying information. Sample prompts may include:
   - o "Please elaborate on the concept of _____."
   - o "Please provide three examples of _____."
   - o "Please describe the concept of _____ at an 8th grade level."

What concept did you choose to learn more about? What prompt(s) did you use? How did the content generated here differ from previous iterations?

5. Consider the assigned book chapters that you were asked to read. When comparing the AI-generated content to the assigned book chapters you read, what terms or concepts are missing from the generated responses?

As a group, identify at least three concepts or terms that were covered in the book chapters that were not covered in the AI-generated content and list them here.

6. As a group, use the genAI tool explore <u>one</u> of these concepts.

What prompt(s) did you use to learn more about this concept?

Compare and contrast the AI-generated content with the material from the book chapters. Are there commonalities? Is the information across sources consistent? Is the AI-generated material accurate?

7. Now, as individuals, ask the genAI tool to generate five operational definitions for a psychological construct of your choice. (Examples of psychological constructs include things like stress, shyness, happiness, self-esteem, attention, intelligence, aggression, etc.)

What constructs did you request operational definitions for?

What do you notice about these operational definitions? What do they have in common? Can you identify any weaknesses with any of the definitions?