

Leveraging ChatGPT for Critical Thinking in STEAMM

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Presenter: Dr. Sindia Jimenez Rivera & Dr. Ana Maria Porras, Herbert Wertheim College of Engineering

Hands-On Activity Overview

In this hands-on activity, you'll have the opportunity to explore the practical application of ChatGPT in generating course content and designing engaging learning activities for your STEAMM courses. Follow the steps below to actively participate and contribute to a crowdsourced handout.

Example Prompts

- **Critical Thinking in Biology:**
 - Prompt: "Generate a case study that challenges students to apply biological concepts to address an environmental issue, considering ethical implications and global perspectives."
- **Engineering Ethics:**
 - Prompt: "Create a scenario that involves a complex engineering decision. Ask students to analyze the situation, considering ethical considerations, social responsibility, and potential global impacts."
- **Data Science and Social Justice:**
 - Prompt: "Develop a project idea for a data science course that requires students to analyze datasets related to social justice issues. Encourage critical thinking about biases, fairness, and ethical considerations."
- **Global Perspectives in Economics:**
 - Prompt: "Generate a set of discussion questions that prompt students to critically analyze economic theories and policies from a global perspective, considering their impact on different societies."
- **Medical Ethics Case Study:**
 - Prompt: "Craft a realistic medical ethics case study that challenges students to apply ethical principles, cultural sensitivity, and global awareness in making healthcare decisions."
- **Sustainability in Environmental Science:**
 - Prompt: "Create an assignment that tasks students with proposing sustainable solutions for a local environmental issue. Encourage critical thinking about the ecological, economic, and social aspects of their proposals."
- **Artificial Intelligence and Social Impact:**
 - Prompt: "Design a project for a computer science course that explores the social impact of artificial intelligence. Challenge students to critically assess the ethical implications and propose guidelines for responsible AI development."
- **Mathematics and Social Issues:**
 - Prompt: "Generate a set of mathematical problems that relate to social issues such as poverty, inequality, or environmental sustainability. Encourage students to apply mathematical concepts to analyze and propose solutions."
- **Interdisciplinary Collaboration:**
 - Prompt: "Create an assignment that requires students from different STEAMM disciplines to collaborate on solving a real-world problem. Emphasize critical thinking, effective communication, and consideration of social responsibility in their solutions."
- **Business Ethics in Finance:**

- Prompt: "Develop a case study related to financial decision-making that challenges students to analyze ethical dilemmas, consider social responsibility, and propose strategies for responsible financial management."

Individual Work

- Utilize ChatGPT to create new content or assignments specific to your courses.
 - Think about a concept or topic in your course where you'd like to integrate a global perspective or social responsibility aspect.
 - Use ChatGPT to generate prompts, questions, or content related to this topic.

Group Discussion

- Engage with your peers to share and refine your ideas.
 - Discuss the challenges and successes you encountered during the ChatGPT-driven content creation.
 - Provide feedback and suggestions to enhance each other's ideas.

Crowdsourced Handout

- Contribute to a collective resource of ChatGPT-generated ideas.
 - Submit your ChatGPT-generated content or assignment ideas to create a comprehensive handout.
 - Your contributions will be compiled and shared with all participants as an inspiration for future projects in your classrooms.

Tips for Successful Participation

- Be creative and open-minded in your use of ChatGPT.
 - Consider the real-world applicability and engagement level of your generated content.
 - Collaborate actively during the group discussion to benefit from diverse perspectives.

Conclusion

This hands-on activity aims to empower you to use ChatGPT as a tool for designing impactful learning experiences in your courses. Your contributions will collectively create a valuable resource for the entire workshop community. Thank you for actively participating and contributing to the shared knowledge!