Simulated Role-Play Video Scenario Using Generative AI Tools

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1. Background

The CPT409 Research Project Management module serves 45 MRes Computer Science and Bioinformatics students, providing foundational knowledge of project management in research environments. An existing flipped-classroom assignment required students to present a specific project management knowledge area. However, students often focused heavily on theoretical explanations without effectively applying concepts to real-world scenarios, limiting learning to the “understanding” level of Bloom’s taxonomy. Role-play, as an established simulation-based learning method, enhances cognitive, affective, and psychomotor development. With recent advances in LLMs and Generative AI, students can now use AI to generate scripts, dialogues, images, audio, and even movie clips. This case integrates XIPU AI and other generative tools to support students in applying project management theory and enhancing creativity.

2. Solutions

In this case study, students used XIPU AI and other Generative AI tools to create a simulated role-play video related to their assigned project management knowledge area. The goal was to demonstrate the application of theory through scenario-based storytelling rather than produce a technically polished movie. Solutions included:

1. **Integrating XIPU AI and Generative AI tools into the learning workflow:** Students used XIPU AI for scriptwriting, character development, and scene descriptions, and used other China-accessible tools (e.g., Wenxin Yiyi, JianYing AI) for audio, visual, and video generation.
2. **Providing structured training materials:** A Learning Mall wiki included tool guides, a Demonstration Movie, a Prompt Document, and resources supporting each stage of movie creation, helping students navigate the entire production process.
3. **Requiring detailed prompt documentation:** Students submitted a Prompt Document recording all prompts used to generate AI content, allowing instructors to assess AI usage depth and learning processes.
4. **Emphasizing the integration of theory and practice:** Marking criteria focused on creativity, theoretical relevance, narrative coherence, and the integration of the role-play video within the final presentation.
5. **Supporting creativity and self-directed learning:** Generative AI acted as a creative partner, enabling students to produce narratives, dialogues, and visual elements efficiently, allowing deeper focus on applying project management concepts.

3. Outcomes and Benefits

All 15 student groups successfully produced role-play scenario videos using Generative AI, covering contexts such as the film industry, Olympic ceremony design, and ERP software development. Student feedback indicated significant gains in efficiency and creativity, particularly in scriptwriting, narrative development, and conceptual understanding. High questionnaire scores included improved time efficiency (4.2) and enhanced theoretical understanding (4.0). Students highlighted AI's strength in generating coherent dialogues, voice-overs, and story structures. Some noted limitations in AI video-editing tools, which required substantial manual input. Overall, students expressed both enthusiasm and critical awareness, emphasizing the value of AI as a support tool while acknowledging the need for human oversight.

4. Replicability and Promotion Value

This approach is replicable across modules that require bridging theory and practice, especially in management, design, engineering, and language education. Generative AI-supported role-play effectively pushes students from "understanding" to "application." The Prompt Documentation framework is broadly transferable for fostering AI literacy across disciplines.

5. Next Steps

Next steps include refining the Prompt Documentation requirements to better track students' AI usage patterns and leveraging XIPU AI to automatically generate usage reports for instructors. Future work will also focus on improvements in AI-based video editing and material generation tools to streamline the creation process and enhance learning outcomes.