**1/ Title of The Project**

**Experiencing Co-Creativity: The Practice and Evaluation of Writing Reality Show Scripts with GPT-4 by Professionals**

**2/ Objectives**

1. Academically, not many research works have been done on the implementation of LLM in **reality show script** writing although there is a long standing topic for applying LLM to generate film/TV/play scripts. This project aims to fill the gap. In addition, most of them only focus on story/plot generation itself, which is understandable as it’s more technology-related, but we will focus on the **production process** which includes pre-production (the generation of ideas, the casting, the choices on locations) and production (the script).
2. Practically, GPT4 has a huge improvement compared to previous versions and arguably has become an unprecedented tool. Its release might lead to a fundamental revolution in the creative industry. To have a systematic idea on how GPT4 could (or not) help the production, and also to shed some light on future development of TV show script writing systems, we’d like to see how GPT4 could help the professionals in the current workflow. More specifically:
   1. To what extent and for what part is it helpful? (Both advantages and shortcomings: e.g. creativity, bias, plagiarism, etc.)
   2. How do the professionals feel about the co-creativity process? (Ownerships, user experiences)
   3. How is the quality of the final output?

**3/ Design of the project**

**3.1/ The Practice**

4 professionals will be invited to complete 2 tasks and produce 2 final outputs with GPT4.

**Background of the professionals**

* All of them have ~~over 3 years of~~ working experience in the industry as a TV producer.
* Most of them have not tried GPT4 before or other LLMs. They are not familiar with writing entirely with GPT.
* Have both females and males, but gender is not controlled here.
* Not all of them come from the same company.

**Name list:**

*J. Li* (Male), who has established his own production company A, has over 10 years experience within this industry. He is using Notion, so has a general idea on using AI for producing content, but did not try the GPT4 model before nor did he use it to co-write an entire script.

*H. Xu* (Female), who is a senior member of a production company B, has over 6-year experience. Never used LLM before, but is aware of this concept and has seen other people using it for producing TV show content.

*J. Lei* (Female), who is a senior member of a production company C, has 4-year experience. Never used LLM or seen other people using it.

*R. Xie* (Male), who is a junior member of a production company D, has 1-year experience. Has tried GPT4 but is not familiar with it.

**Task 1** (0.5 hour)

To generate an idea about a novel show based on one observation they have in recent daily life (for example, the heated discussion on GPT in education). The output should at least include:

* 1. The title
  2. The genre (talent/relationship/travel/food/adventure/comedy/talk show, etc.)
  3. A brief introduction to the show

**Task 2** (1 hour)

To generate a script about one episode from a show with a given setting.

***The setting****: There is a cultural travel show in which we invited three resident participants to explore a city in China. The show aims to unfold the amazingness of the city. The broadcasting length is one-hour per episode. Assume that budget is not an issue. The show will be broadcast simultaneously on both cable TV and streaming media (e.g. Netflix).*

**The script should include** (See Appendix 1 for details):

1. Title
2. Background of the show (its purpose, targeted audience, brief description of the content)
3. Background of the episode (rationale of choices on the cities, brief description of the content)
4. Participants (Thus includes casting)
5. At least two locations in the city, and at least one task for each location.
6. Necessary dialogues between participants

**In the writing process, there are some key points for the professionals to bear in mind:**

1. Be a tutor not a workhorse/busy bee. It is okay to leave most works/tasks to GPT4, what need to do is to make sure the co-creativity process is in the right direction, to ask the right questions and adjust the outputs, making it more readable and coherent.
2. Keep the trace. Feel free to make comments on the original outputs or make any amendments, or maybe write down your feelings about the process. But please track the changes and leave all the marks. And also, leave the conversation as it is.
3. Have a decent final output. It means that the final output is readable and understandable and follows the template. It should be decent enough to be a real script that could be used for real shooting. It is okay to extend the time limit (reasons will be asked in the interviews.)
4. Experience matters. What is truly valuable to this research is your experience and interactions with GPT4, though the quality of script is important, please do not be too obsessed with not how good the script is and omit the experience itself.

**Additional information**

* The GPT4 account will be provided by us.
* We will use Microsoft Word for text editing.
* There will be a short tutorial on using GPT4.
* The final outputs will be translated into English if necessary.
* The scripts of episodes from task 2 will be combined together and become the whole script for the show.

**3.2/ The Evaluation**

**Q1**: To what extent and for what part is GPT4 helpful? (Both advantages and shortcomings: e.g. creativity, bias, plagiarism, etc.) /Objective observations on quality of output.

**Methods:** Quantitative scales + Qualitative interviews

Participants: the same professionals

5-point Likert scales, from strongly disagree to strongly agree, asked in general:

* Helpfulness: GPT4 is helpful.
* Uniqueness: The final script is unique.
* Satisfaction: The quality of the final output is good.
* Recommendation: I would (recommend) use it for script writing.
* Creativeness/inspiration: GPT4 is creative in generating/inspiring novel ideas.

Interview outlines (we walk through their scripts part by part):

* How do you collaborate with GPT4? Walk through the process and every part
* Things GPT4 did well?
  + And among them, the most impressive one (namely, after this, what would you use GPT4 for?)
* Things GPT4 could improve on?
  + And among them, the most disappointed/frustrated on (namely, what definitely has to be done by humans)
* When did you get stuck writing?
* Any case when you need to ask several questions for a final good answer? Is it the way you ask is not easy to understand or else.
* Issues in stereotypes/bias?
* Issues in plagiarism?
* Issues in incorrect information given.
* Issues in weird phasing.
* Issues in coherence/relevance.

**Q2**: How do the professionals feel about the co-creativity process? (Ownerships, user experiences) /Subjective feelings about process, user experience

**Methods:** Quantitative scales + Qualitative interviews

Participants: the same professionals

Scales:

* Collaborativeness: I felt like I was collaborating with the AI
* Ownership: I feel ownership over the final script
* Enjoyment: I enjoyed writing the script
* Pride: I am proud of the final script

Interview outlines (Designing the questions as we are going to create a system for show script writing based on GPT4 API and thus collecting insights on user experiences):

* With GPT4 covering the detailed work, do you still feel like it’s your own work?
* Any suggestions for user interface?

**Q3**: How is the quality of the final output?

(Additional to questions above which covers quality evaluations from the professionals)

**Methods:** Quantitative scales + qualitative interviews

Participants: 10 TV show fanatics will be invited to evaluate the quality of the script, none of them has experienced working in the industry.

Scales:

* Humanoid: I could tell the difference between parts written by GPT4 and humans.
* Readiness: How easy for you to read and picture the scenes
* Attractiveness: How attractive do you find the show is
* Fun: How funny do you find the tasks are
* Uniqueness: The show is unique

Interview outlines:

* Which parts do you think are written by GPT4?
* Which parts do you find specifically interesting?
* Which parts are unique/familiar (as have been seen in other shows-considered plagiarism)?

**4/ Timeline**

| 18 Jul | Preparation completed. | Confirmed at least 4 participants.  Has the script template ready.  Settled down the detailed plan. |
| --- | --- | --- |
| 20 Jul | Tutorial completed.  Writing kicked off. | According to different participants’ time schedules, the tutorials are arranged accordingly. And they could start writing once finished. |
| 10 Aug | Script writing finished.  Survey and interview sheet prepared. | Participants are expected to finish the script.  Survey sheet and interview question lists generated. |
| 15 Aug | Survey and interview completed. | Arrange time slots with participants for post-writing practices. |
| 30 Aug | Report Wrap-up | Wrap up the results, analyse, and write down the report. |

**5/ Reference**

1. Mirowski, Piotr, et al. “Co-Writing Screenplays and Theatre Scripts with Language Models: An Evaluation by Industry Professionals.” 2022. https://dl.acm.org/doi/abs/10.1145/3544548.3581225.
2. Rosa, Rudolf, et al. “GPT2-based Human-in-the-loop Theatre Play Script Generation”. 2022. <https://aclanthology.org/2022.wnu-1.4/>.
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5. Yuan, Ann, et al. “Wordcraft: Story Writing With Large Language Models”. In 27th International Conference on Intelligent User Interfaces (IUI '22). Association for Computing Machinery, New York, NY, USA, 841–852. 2022. https://doi.org/10.1145/3490099.3511105
6. Gervás, Pablo, et al. “Story Plot Generation Based on CBR.” Knowledge-Based Systems, vol. 18, no. 4, 2005, pp. 235–242.

**6/ Appendix 1 Script Template**

[TV Show Script Template (for LLM Project)](https://docs.google.com/document/d/1XR2ewMjXPKL2ofS3ho9pTbaNuyzugxdAxWCeIK-RUhU/edit)