

Application of ChatGPT in the Role-play Game of Modeled United Nations

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Abstract: When Artificial intelligence has emerged, it has changed the area of education dramatically. In this study, a game about Modeled United Nations was designed with ChatGPT as one of the players. The study analyzed how ChatGPT will affect the students' resolutions about the international issues in the group discussion and negotiation. An API to ChatGPT is used to record the students' interaction with ChatGPT, and a quantitative analysis of interactions and survey is used to collect the students' actions and feedback about the activity. The research has expected the students to learn how to use AI technology correctly and have a better understanding about the global issues. With the help of AI, the students are also expected to make better decision with AI, and have the ability of problem-solving while working as a team.

Keywords: AI Chatbot, Model United Nations (MUN), Game Development

1. Introduction

Artificial Intelligence (AI) has played a key role in the digital transformation nowadays. The emergence of ChatGPT not only has the revolutionary potential for Education, but also changes the way how people use AI. With its comprehensive online database and powerful Natural Language Processing model, ChatGPT can understand the various questions and provide corresponding answers for users. They can learn how to ask ChatGPT questions precisely to get the background knowledge and how to use all the information provided from ChatGPT to solve the questions.

In this study, a game about Modeled United Nations (MUN) was designed to incorporate international issues and ChatGPT that allows players to use ChatGPT as a consultant. This study was to analyze when the students face the conflict issue, how they retrieve information from ChatGPT and propose resolutions with ChatGPT's guidance and directions.

2. Related work:

2.1 ChatGPT

The rapid development of Natural Language Processing has brought lots of new applications for education. Students can interact and start a conversation with ChatGPT and artificial intelligence. They must think and explore about the questions in their own words and receive the responses from ChatGPT to personalize the information and making it their own to achieve the meaning of learning (Mohammadreza, et al., 2023). ChatGPT can be applied on the invention of educational Question Answering System. It can achieve a more intellectual system by providing corresponding answers according to the questions.

Therefore, in this study, we expect the students to view ChatGPT as their learning companion or consultant, who they can work with while facing the international issues. The

students will use ChatGPT to find the directions of solutions and help them to make the reasonable decisions.

2.2 Modeled United Nations

Modeled United Nations (MUN) can elevate students' learning abilities include speaking, negotiation skills, and problem-solving ability. Besides, it can help students have a better understanding on global affairs. During the process of MUN, students will play in the roles of ambassadors and discuss current international issues according to the rules and structure of the United Nations (Daniel, 2003). This study was designed for a game in the form of MUN. While setting conflicts between countries, the student will play as the delegates of each country to solve conflicts with other countries by negotiations and conferences.

3. Modeled United Nations Game Design

This study was designed in the form of MUN. In the game, students will be the representatives of different countries. Each country consists of three members and ChatGPT as the fourth. Every student will play as a different role in the country to discuss their country's approach to the issues presented. Conflict issues with opposed standpoints will be presented in the game so that students can have different perspectives toward the issues. During the game, the students can use ChatGPT any time to retrieve information and possible resolutions toward the issue. They would form problem-solving directions from the responses of ChatGPT and through the discussion between group members. Then, they will make declarations for the country they represent. The gaming flow of this study is as Figure 1.

Before the game starts, the rules of the game and the operation of the system will be introduced to the students. First, the players will be divided into groups. The background knowledge about each country will be given to each group. Then, the group discussion will start and students can ask for advice by consulting ChatGPT. After gaining response from ChatGPT, the students will have to digest the suggestions of ChatGPT, integrate it with their ideas, and propose resolutions for the issues. The presentation process will begin once every group has finished integrating their ideas completely. Every group will debate and negotiate about the resolutions on the issues with other groups. Resolutions will be decided during the process of voting at the end of the game. After that, the instructor will ask the students' feedback about the game and provide their own perspectives about the MUN activity.

The study will observe how the students enquire ChatGPT of the issues and what kind of the decisions they make from the responses of ChatGPT by using their interaction records. With the design of the game, the students can not only enhance their understanding about international issues, they are also expected to grow critical thinking and collaboration abilities.

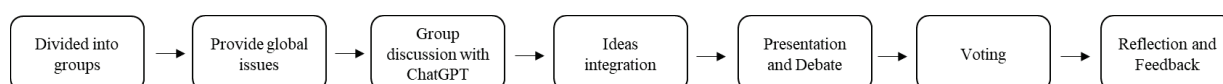


Figure 1 Game flow

4. Research design

This study is to realize the interaction between students and ChatGPT during the process of MUN. It is designed to discuss about students' cooperation with ChatGPT and analyze how ChatGPT influence their decisions. The study will collect research data by video recordings. At the same time, by using an API to connect with ChatGPT will the researchers save the conversation records in the form of CSV files. At the end of the study, students need to fill in a quantitative survey to record the students' feeling about the activity and their thoughts

about consulting with ChatGPT. The records will be used to analyze and evaluate the interactive effect between students and ChatGPT in the MUN game.

5. Expected Results

This study is designed to help students learn how to discuss with AI and internalize knowledge in the response from ChatGPT to help them make decisions through the process of the MUN game. While interacting with ChatGPT, students can learn more knowledge and perspectives, and consider about the various possibilities of the issues. Playing as a teammate or consultant, ChatGPT can provide students valuable information and advices to help them have a better understanding of the issues during the game. Moreover, these learning experience and skills can help students to gain advantages in the game and have important effects for students' learning in the future

6. Conclusion

In this study, students are expected to learn not only how to debate on international issues and make decisions with their teammates, but also how to use AI correctly and combine advices from ChatGPT and others to propose resolutions for the issue. AI is also expected to help students cooperate with others in a more efficient way and get critical answers from ChatGPT. Through the practical participation of MUN, the students can discuss the resolutions for the international issues as a team which can promote the students' retention of information and their impression of learning.

Acknowledgements

This study is supported in part by the National Science and Technology Council (previously known as Ministry of Science and Technology) of Taiwan, under MOST 108-2511-H-008 - 016 -MY4.

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