OrbiFIRE - Orbiting the Field Report

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ABSTRACT

OrbiFIRE - Orbiting the Field Report is an innovative and interactive board game-based teaching aid. It addresses the needs of creating digital teaching and learning platform for to enhance classroom learning. OrbiFIRE is specially designed for LCC402: English for Oral Reporting in UiTM. OrbiFIRE uniquely uses POTM.File to create the platform. The game starts with questions and answers relevant to field report investigations. OrbiFIRE enhances learners' understanding of the elements of a complete field report project. The game features engaging mechanics of a board game, attractive clickable elements, avatar and dice, as well as dynamic astronomical visuals that respond to the actions of two to four players. The novelty of this digital game is it runs seamlessly as a standalone file and requires no installation. It is easily accessible using QR code on various devices with office software support either with online or offline connection. The potential benefits and outcomes of OrbiFIRE demonstrate high efficiency and user-friendliness for enjoyable classroom activities, for the usage of diverse users even with no internet connectivity.

Keywords: OrbiFIRE - Orbiting the Field Report, POTM.File, digital teaching and learning platform, digital board game

INTRODUCTION

It has always been a challenge to create an innovative and interactive game-based teaching and learning platform. Higher education increasingly seeks innovative approaches to enhance effective teaching and learning. Game-based learning involves designing learning activities, so that game principles and characteristics are embedded within the learning activities (Batsaikhan et al., 2021). To meet these needs, OrbiFIRE- Orbiting the Field Report is a digital game-based teaching and learning platform which is specially designed for an English Language course, LCC402: English for Oral Reporting in Universiti Teknologi MARA (UiTM). This course is taken by first and second semester bachelor's degree students from various faculties. This course is designed to provide students with the foundation for effective oral reporting. It prepares students with the speaking and writing skills to report observations based on a field report. OrbiFIRE, a digital game-based innovation using POTM file which stands for PowerPoint Template with Macros. It is a file format used by Microsoft PowerPoint to create presentation templates which may contain text, pictures, videos, graphics (Vertopal, 2025). POTM enlivens both instructors and students to be highly interactive and engaged in classroom learning. In a study conducted by Balalle (2024), incorporating technology into the classroom is a very effective way to increase student-teachers' involvement in classrooms.

Problem Statement

Despite the rapid development of digital learning tools, many existing platforms unsuccessfully provide effective, interactive and engaging learning experiences that can sustain learners' motivation and participation in classrooms. The games used in class are designed with irrelevant content and also inappropriate level for the classroom learning. In the context of English language courses such as LCC402: English for Oral Reporting, which is one of the new English courses in Universiti Teknologi MARA, students continue to encounter significant challenges in comprehending and completing field report projects effectively due to the limited availability of innovative and practice-oriented resources. Traditional pedagogical approaches often lack the capacity to deliver dynamic and immersive learning environments that enhance both efficiency and interest. Therefore, educators need to check the suitability of the game content before giving to the learners and decide whether a game-based learning approach is the best fit the objective of the learning (Harding,2023).

Moreover, issues of accessibility remain prevalent when platforms are not adaptable across multiple devices, hence restricting their usability for diverse groups of learners. Educators also face constraints in implementing effective game-based learning strategies and in integrating technological features such as QR codes to expand accessibility and interaction. Consequently, the absence of a comprehensive and interactive digital platform contributes to the persistence of disengagement, reduced practical application, and poor learning outcomes in oral reporting instruction.

Objectives

1. To present the development of OrbiFIRE - Orbiting the Field Report for an English Language course, LCC402: English for Oral Reporting.
2. To present users' satisfaction on OrbiFIRE - Orbiting the Field Report.

Product Description

The game features engaging mechanics of a board game, attractive clickable elements, avatar and dice, as well as dynamic astronomical visuals that respond to the actions of two to four players.

How to Play?

Step 1: Set a group of 2 to 4 players.

Step 2: Each player chooses an Avatar on the "Start" platform.

Step 3: Player 1 clicks the dice.

Step 4: Player 1 moves his/her own Avatar on the platform based on the numbers on the dice.

Step 5: Player 1 clicks the "Q" Alien.

Step 6: Player 1 answers one pop-up question.

Step 7: If Player 1 answers correctly, he/she remains at the current platform. If Player 1 answers incorrectly, he/she moves one platform backward.

Step 8: Repeat Steps 3 - 7 for the remaining players.

Step 9: The first player reaches OrbiFIRE Portal becomes the WINNER.

What are the questions in "Q" Alien?

The questions provided are based on the course learning outcomes designed in the syllabus. Below are a few samples of questionsin "Q" Alien:

Background of study

What are the ideas discussed in the Background of The Study?

1. Definition of the topic and related studies
2. Definition of the topic and problem statement

Objectives

What should be included when stating the objectives of field work?

1. Clear goals showing what the research will focus on.
2. General ideas for solving the problem.

Data collection procedure

What are effective methods for collecting data?

1. Use tools like photos, checklists, and field notes.
2. Depend mostly on memory and casual talks.

Analysis of findings

What criteria should guide the analysis of the findings?

1. Check whether the data answers the objectives.
2. Check whether the findings fit the recommendations.

Conclusion

What should be included in the conclusion and recommendation section?

1. Sum up your findings and give practical suggestions.
2. Repeat the introduction and share personal views.

References

How do references enhance the credibility of a report?

1. Support the arguments with reliable sources.
2. Enhance the objectives of the research.

Methodology

The development of OrbiFIRE - Orbiting the Field Report consists of five main stages, which are:

Stage 1: Planning

Identify learning objective of LCC402: English for Oral Reporting.

Stage 2: Design

Create game concepts, mechanics, and questions aligned with course content.

Stage 3: Development

Build the game using POTM file format and generate QR code for access.

Stage 4: Implementation

Introduce the platforms to users for online classroom use.

Stage 5: Evaluation

Collect feedback to assess users' satisfaction.

POTENTIAL FINDINGS AND COMMERCIALISATION

Stage 1: Planning – Identify a learning objective of LCC402: English for Oral Reporting.

Course Learning Objective:

To enable students to demonstrate verbally and in writing the procedures and findings of a field report.

Stage 2: Design – Create game concepts, mechanics, and questions aligned with course content.

The design consists of a Welcome Page (Figure 1), Components of the board game (Figure 2).

Stage 3: Development – Build the game using POTM file format and generate QR code for access.(Figure 3).
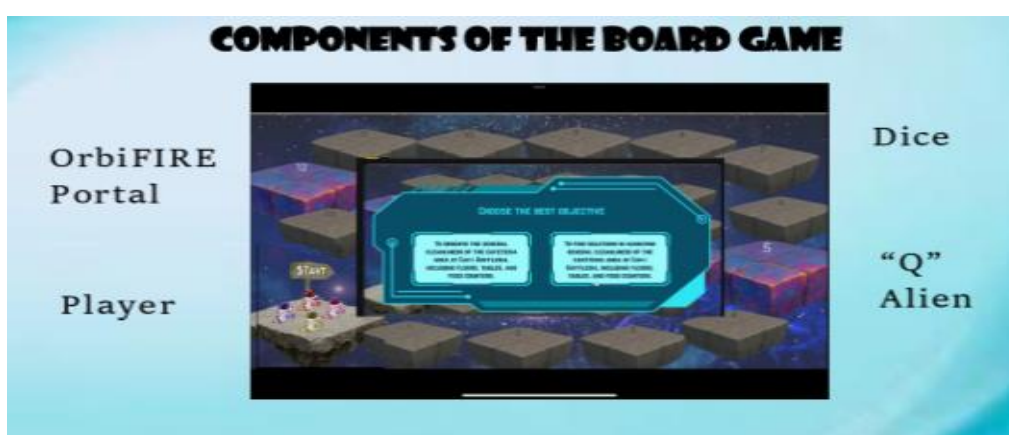
Stage 4: Implementation – Introduce platform to users for online classroom use. (Figure 4-Figure 7)

Stage 5: Evaluation – Collect feedback to assess users' satisfactions (Table 1)

Figure 1: Welcome Page

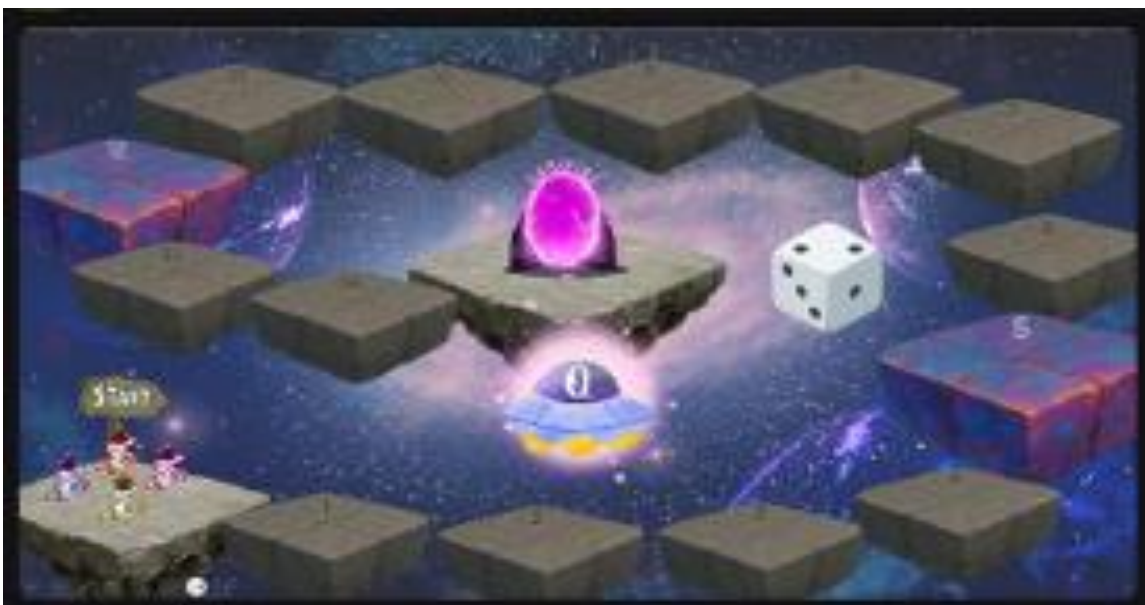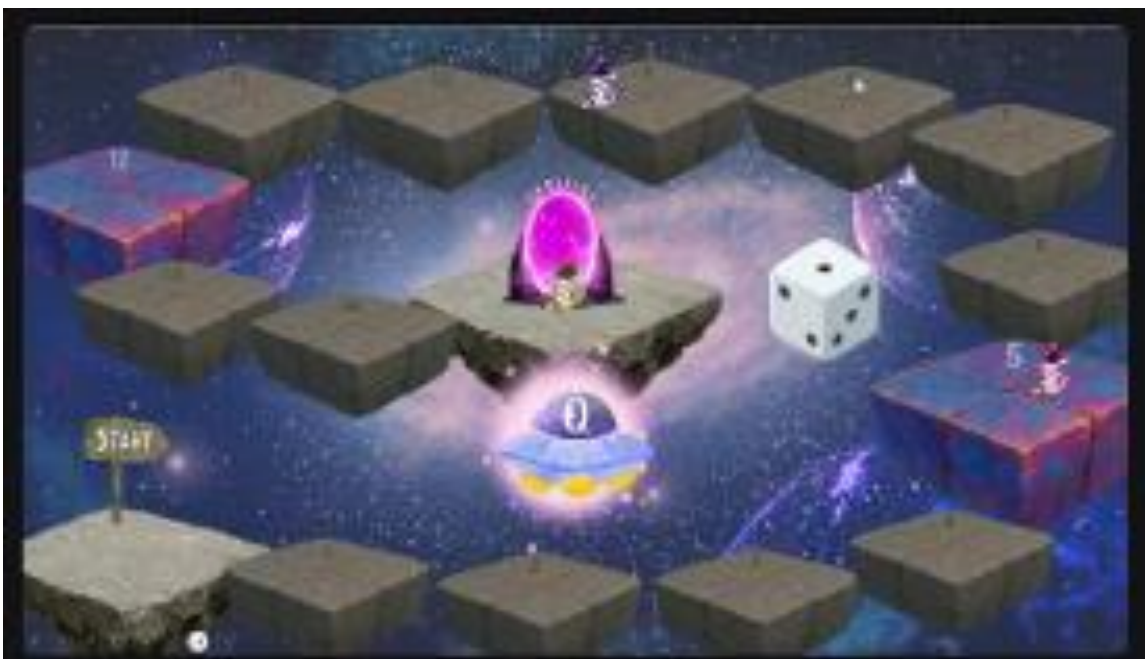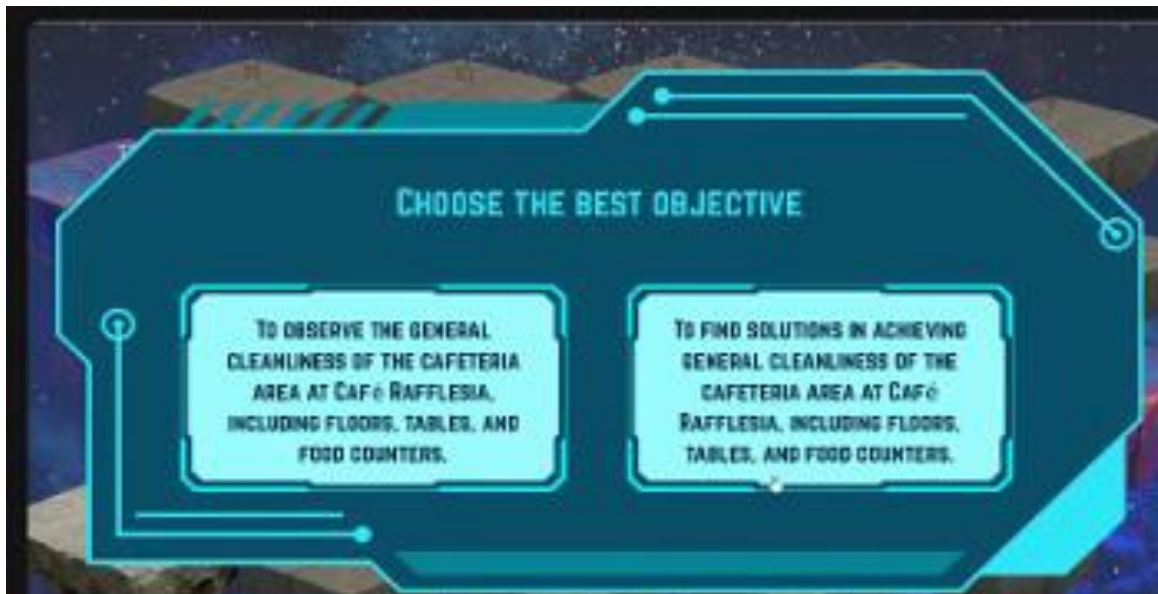**Figure 2: Components of the board game**

Figure 3: OrbiFIRE QR

Figure 4: OrbiFIRE How to Play? (Steps 1 - 2)

Figure 5: OrbiFIRE How to Play? (Steps 3 - 4)

Figure 6: OrbiFIRE How to Play? (Steps 5 - 7)

Figure 7: OrbiFIRE How to Play? (Steps 8 - 9)

Figure 8: Users experience playing the OrbiFIRE

The results in Table 1 indicate that all users agreed on their satisfaction in using OrbiFIRE - Orbiting the Field Report

Table 1. Users' satisfaction on OrbiFIRE - Orbiting the Field Report

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Effective	0%	0%	0%	25%	75%
Ease of Use	0%	0%	0%	50%	50%
Attractive Design	0%	0%	0%	0%	100%
Suitable Time of Use	0%	0%	0%	0%	100%
Relevant	0%	0%	0%	0%	100%

Novelty

This product was invented using POTM files with PowerPoint 2007 and contains default settings that can be a convenience for users without requiring users to specify the setting either online or offline. The novelty of OrbiFIRE has enhanced student' learning across the geographical location. The novelty of this product is:

- User friendly
- No wi-fi needed
- No installation needed
- Downloadable via QR Code
- Compatible with all devices equipped with office software

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REFERENCES

1. Balalle, H. (2024). Exploring student engagement in technology-based education in relation to gamification, online/distance learning, and other factors: A systematic literature review. https://www.sciencedirect.com/science/article/pii/S2590291124000676
2. Batsaikhan, O.; Chen, Y.; Miller, C. L.; Pluskwik, E. & Pribyl, J. R. (2021). Game Based and Adaptive Learning Strategies. https://mlpp.pressbooks.pub/gamebasedlearning/
3. Fitzgerald, C. (2023, July 31). 8 Game-Based Learning Platforms: Discover The Best Ones Here. Https://Www.Oakinnovation.Com/Author/Admin123
4. Harding, E. (2023). The pros and cons of game-based
5. learning. Bedrock Learning. https://bedrocklearning.org/literacy-blogs/the-pros-and-cons-of-game-based-learning/
6. Vertopal (2025). Microsoft Powerpoint Open Xml Macro Enabled Template (.Potm). Https://Www.Vertopal.Com/En/Format/Potm