

University of Science and Technology of Southern Philippines

GAMIFIED-E LEARNING

**Ubaub, Edilmar
Galanque, Jean Era
Sabuero, Kerah
Guibone, Lady Jean
Guardiario, Diane Angel**

An Objected Oriented Programming Project

Department of Information Technology

College of Engineering and Technology

University of Science and Technology of Southern Philippines – Claveria Campus Claveria

Misamis Oriental, 9004 Philippines

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I. Background of the Study

Gamified e-learning applies game-inspired strategies to digital learning environments to enhance student engagement and motivation. Traditional e-learning methods often face challenges in maintaining learners' interest and participation, which can impact retention and academic performance. Gamification seeks to address these issues by creating an interactive and engaging learning experience. This study aims to investigate the effectiveness of gamified e-learning in improving learner engagement and outcomes while addressing the challenges associated with its implementation.

II. Objectives

The objective of gamified e-learning is to enhance the learning experience by fostering engagement, motivation, and active participation. It aims to create an interactive environment where learners can develop knowledge and skills effectively while enjoying the process. By integrating game-inspired strategies, this approach seeks to improve knowledge retention, promote continuous learning, and make education more accessible and enjoyable for diverse learners.

III. Scope and Delimitation of the Study

Scope:

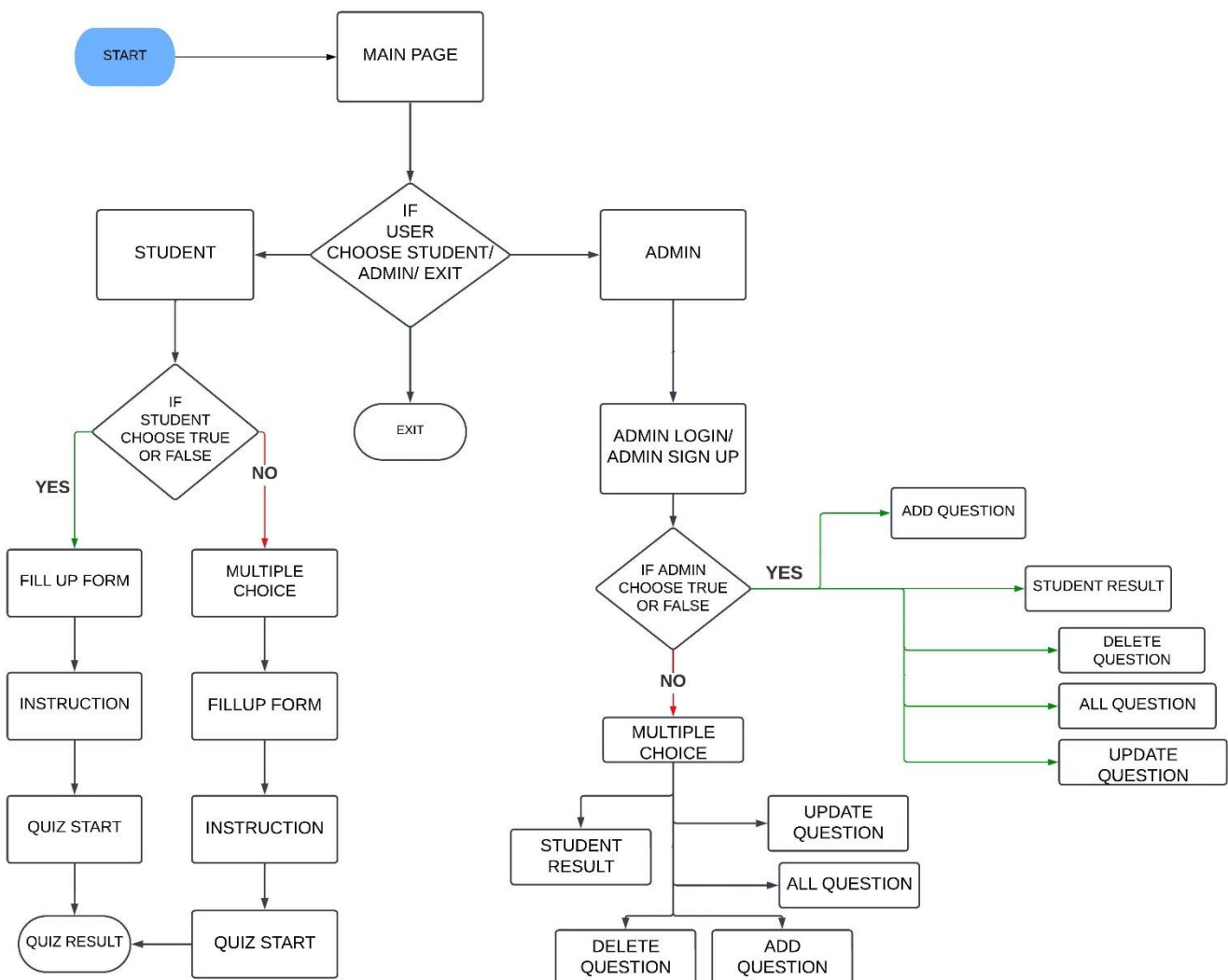
Gamified e-learning focuses on integrating game-like elements into digital educational platforms to enhance learner engagement,

motivation, and knowledge retention. It is applicable to various fields, including academic institutions, corporate training, and personal development.

Delimitation:

The study or implementation of gamified e-learning is limited to offline platforms and may not address challenges requiring real-time updates or online collaboration. It relies on pre-installed software or localized systems, which may limit content updates and accessibility for diverse subjects. Additionally, its effectiveness depends on the quality of the gamified design and the relevance of the content, which may vary across different learner preferences.

Flowchart



This flowchart illustrates the process flow of a gamified e-learning system, showing the roles and actions available for students and administrators (admins). Below is a description of its components:

Student Flow

1. Start with Quiz Type: Students select the type of quiz: Multiple Choice or True or False.
2. Fill-Up Form: Students are required to fill out a form before proceeding.
3. Instruction Phase: Students receive instructions or guidelines for taking the quiz.
4. Quiz Start: The quiz begins, and students complete their chosen type of test.
5. Quiz Result: Upon completion, the system generates and displays the quiz results.

Admin Flow

1. Sign-Up/Login: Admins must first sign up and log in to access their features.
2. Question Management: Admins can perform the following tasks for both Multiple Choice and True or False quizzes:

Add Question: Add new questions to the database. Update

Question: Modify existing questions.

All Question: View all available questions.

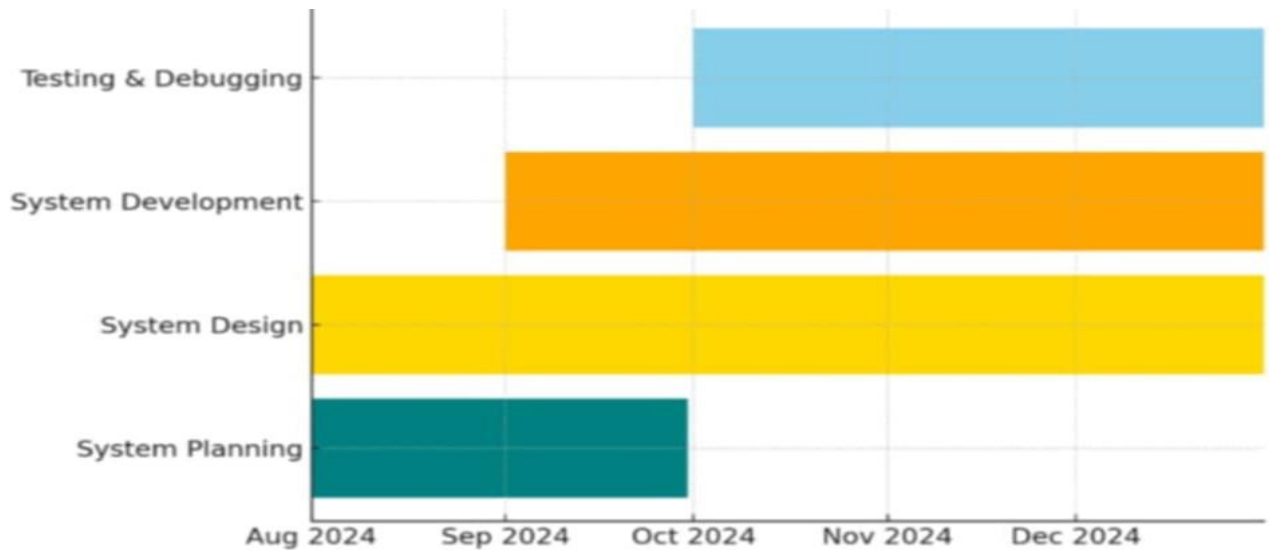
Delete Question: Remove unnecessary questions.

3. Student Results: Admins can access and review the quiz results of students for performance tracking.

Summary:

The flowchart showcases a structured interaction where students engage with quizzes and receive results, while admins handle quiz content management and track student performance. This streamlined process ensures an efficient and interactive system for e-learning.

V. Gantt Chart



This is a Gantt chart illustrating a project timeline divided into four phases:

1. Project Planning and Research (Aug 2024 to Oct 2024) – Represented by a teal-colored bar.
2. System Design (August 2024 to December 2024) – Represented by a yellow bar.
3. System Development (September 2024 to November 2024) – Represented by an orange bar.
4. Testing & Debugging (October 2024 to December 2024) – Represented by a light blue bar.

The chart shows the sequential flow of tasks over time, highlighting overlapping phases, particularly between “System Development” and “Testing & Debugging.”

VI. System Design

Fig 1.

Menu page for the student and admin to choose.

CHOOSE

Students

Admin

Exit

Fig 2.

If you click the admin button the admin login will appear.

ADMIN LOGIN

Username:

Password:

☐ ShowPassword

Login Back

Sign Up

Fig 3.

If the admin got Login in the system, the admin will choose a question type.

Quizzes

MultipleChoice

True Or False

Back

Fig 4.

After choosing a type of question in the fig 3, this will appear where you can create/add question, update question, delete question, and check the student result.

GAMIFIED E-LEARNING SYSTEM

Multiple Choice

Add Question

Update Question

All Question

Delete Question

All Students Result

Logout

Back

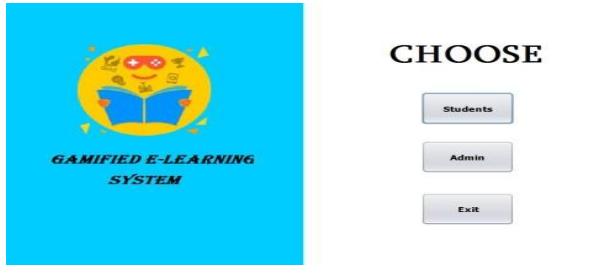


Fig 5.

Menu page for the student and admin to choose.



Fig 6.

If the user choose student, the fill up form will appear.



Fig 7.

After you fill up the form, it proceed to another page where Instruction page will appear.



Fig 8.

If you click Start Quiz you will proceed to this page where the Quiz game start.

VII. Conclusion

Gamified e-learning can make learning more engaging and fun, helping students stay motivated and retain information better. While it works well on offline platforms, its success depends on the quality of the content, design, and accessibility. Despite some challenges, it offers a valuable way to improve learning experiences.

VIII. Recommendation

To improve gamified e-learning on offline platforms, focus on creating engaging and easy-to-use systems with quality content. Ensure it is accessible to all learners, especially in areas with limited resources, and gather feedback to make regular updates and improvements.