GAMEOLOGY AND MULTIMEDIA EXPERT

Gameology And Multimedia Expert
Vol. 2, No. 3, July, 2025, pp. 90-95
Journal homepage: http://ojs.unimal.ac.id/game

Fauna Fantasi Educational Game for Improving English Animal Vocabulary

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Received: 18 Mei 2025
Revised: 20 June 2025
Accepted: 25 June 2025
Available online: 1 July 2025

Keywords:
Educational Game, English Vocabulary, Primary School, Interactive Learning, Game-Based Learning, Language Acquisition

ABSTRACT

This paper presents *Fauna Fantasi*, an educational game designed to support primary school children in learning English vocabulary through an interactive and enjoyable experience. Targeted at learners aged 6 to 12 years, the game integrates playful exploration with language development by challenging players to collect scattered letters that form English words. Featuring cheerful visuals, intuitive controls, and progressively challenging levels, *Fauna Fantasi* aims to maintain engagement while reinforcing new vocabulary. Early observations indicate that this approach successfully captures children's interest and promotes vocabulary retention by embedding learning within an adventurous context. The game's effectiveness can be further assessed through structured pre- and post-tests and by observing how well players identify and construct words during gameplay. Overall, *Fauna Fantasi* illustrates the potential of game-based learning as a meaningful tool to enhance English language acquisition among young students.

1. INTRODUCTION

In today's rapidly advancing digital era, educational games have become highly effective tools to support learning in a fun and interactive manner. By combining elements of entertainment with educational content, these games can keep learners engaged while also helping them absorb new knowledge without the pressure often associated with traditional classroom settings. This approach is especially valuable for children in primary school, who naturally enjoy play-based activities and are highly curious about the world around them.

The game *Fauna Fantasi* was designed with the goal of creating a meaningful learning experience for children between the ages of 6 and 12, corresponding to the primary school level. At this stage, children are eager to explore new things, and introducing educational concepts through games can significantly enhance their motivation to learn. *Fauna Fantasi* takes advantage of this by offering gameplay that not only entertains but also teaches.

The choice of the theme *"Fauna"* highlights the fascinating world of animals, a topic that easily captures children's interest. Animals are commonly used in early education because they are relatable and can be linked to various aspects of learning, such as science, culture, and language. By integrating this theme, the game taps into a rich source of content that can sustain the players' attention over multiple sessions.

Adding a *fantasy* element further enriches the gaming experience. Instead of merely presenting animals in their natural habitats, the game invites players into an imaginative world where they embark on adventures, solve challenges, and collect letters to form the names of different animals. This fantasy approach is intended to stimulate creativity and make the learning process more memorable. When children are immersed in an imaginative setting, they often engage more deeply, which can help reinforce the educational content.

Moreover, *Fauna Fantasi* specifically incorporates the English language to support language learning. In our globalized world, English proficiency is an increasingly important skill. By embedding English vocabulary within the gameplay—especially the names of animals—the game provides a practical and low-pressure way for children to become familiar with new words. They learn by doing, which often leads to better retention compared to rote memorization.

This blend of entertainment, fantasy, and educational goals makes *Fauna Fantasi* a potentially valuable tool for both formal and informal learning environments. It does not merely aim to improve children's English vocabulary but also seeks to develop their cognitive skills, such as memory, pattern recognition, and problem-solving, through the process of finding and assembling letters. By encouraging players to complete missions and reach goals, the game helps maintain their focus and gives them a sense of achievement.

Ultimately, *Fauna Fantasi* was developed to provide a holistic learning experience that aligns with how children naturally learn best—through play, exploration, and imagination. This paper discusses the background, design choices, and early observations of how this game may contribute to enhancing English animal vocabulary acquisition among young learners. In doing so, it aims to highlight how thoughtfully designed educational games can complement traditional learning methods and support important language development objectives.

2. METHOD AND MODELS

2.1 Game Genre and Target Audience

Fauna Fantasi is an educational game designed specifically to improve English language skills, with a primary focus on animal vocabulary. The genre of this game is English language education (edutainment). It aims to combine learning with entertainment to create a memorable and effective educational experience. The target audience consists of boys and girls aged 6 to 12 years, corresponding to primary school students who are in an important stage of language and cognitive development.

2.2 Game Genre and Target Audience

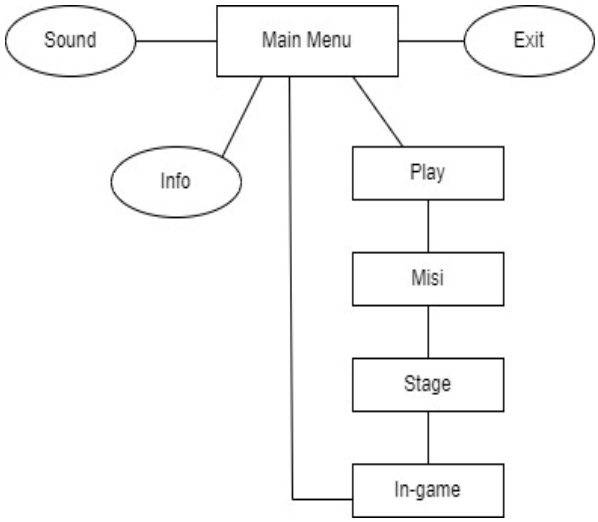

Figure 1. User Interface Design

The game follows a straightforward flow to ensure it remains intuitive and user-friendly for young players. Based on the diagram in Figure 1, the main components of the user interface start with the Main Menu, from which players can navigate to several features:

1. Sound: Allows players to adjust or mute the background sound effects and music.
2. Info: Provides information about the game, including instructions on how to play and the educational objectives.
3. Exit: Lets players close the game application.

From the Main Menu, players can select Play, which initiates the core gameplay sequence. This includes:

1. Misi: The mission screen that presents the task for the current level, such as finding letters to form the name of an animal known for liking honey.
2. Stage: The stage selection and introduction to the gameplay environment.
3. In-game: The actual gameplay where players control the character to explore, collect letters, and complete the vocabulary challenge.

This flow was purposefully kept simple and linear to minimize confusion and maintain engagement among young learners.

2.3 Look and Feel

The visual design of *Fauna Fantasi* adopts a warm evening (sunset) theme. This color palette was chosen to create a calm and relaxed atmosphere, which helps keep players comfortable and focused during gameplay. The cartoon-like characters and environments add a playful element that appeals to children and aligns with the fantasy theme of the game.

Fauna Fantasi is developed to run on both PC and mobile platforms, providing flexibility in terms of where and how it can be played. It is designed as a single-player game, allowing children to progress at their own pace without the pressure of competition. This individual focus supports a more personalized learning experience.

One of the key advantages of *Fauna Fantasi* is its role as an educational tool. The game was specifically designed to help primary school children learn and reinforce English animal vocabulary through an engaging activity of collecting and arranging scattered letters. By integrating language learning with interactive challenges, the game promotes better memory retention and a deeper understanding of the new words. It also enhances other cognitive skills such as problem-solving and attention to detail.

Table 1. Summary of Game Features

Aspect	Description
Genre	Educational English vocabulary game (edutainment)
Target Audience	Boys and girls, ages 6–12 (primary school students)
Game Flow	Main Menu → Mission (Misi) → Stage → In-game
Look and Feel	Warm sunset visual theme to create a calm, relaxed atmosphere
Platform	PC and Mobile devices

Gameplay Mode	Single-player
Educational Focus	Learning English animal vocabulary by collecting letters
Cognitive Skills	Enhances memory, problem-solving, and attention to detail
Additional Features	Sound settings, Info screen, Exit option

Table 1 summarizes the main design elements and educational features of *Fauna Fantasi*. This structured overview highlights how the game's genre, target audience, visual style, and gameplay mechanics were intentionally selected to support vocabulary learning and cognitive skill development in primary school children. By organizing these aspects clearly, it becomes evident that each component of the game was carefully planned to create an effective and enjoyable educational experience.

3. RESULTS AND DISCUSSION

3.1 Gameplay Mechanics

To start the game, players press the Play button on the main menu. Once the game begins, players navigate through various obstacles, where they must avoid enemies while collecting scattered letters and as many diamonds as possible. The collected diamonds will contribute to the final score at the end of each stage. Players must successfully complete two stages to finish the game.

The main mission shown on the mission screen guides players to find letters that together form the name of an animal that likes honey, which in this case is "BEAR". After collecting all the letters, the players' scores increase based on the number of diamonds gathered along the way. This process is illustrated in Figure 2, which displays the in-game environment and elements such as the diamonds, enemies, and scattered letters.

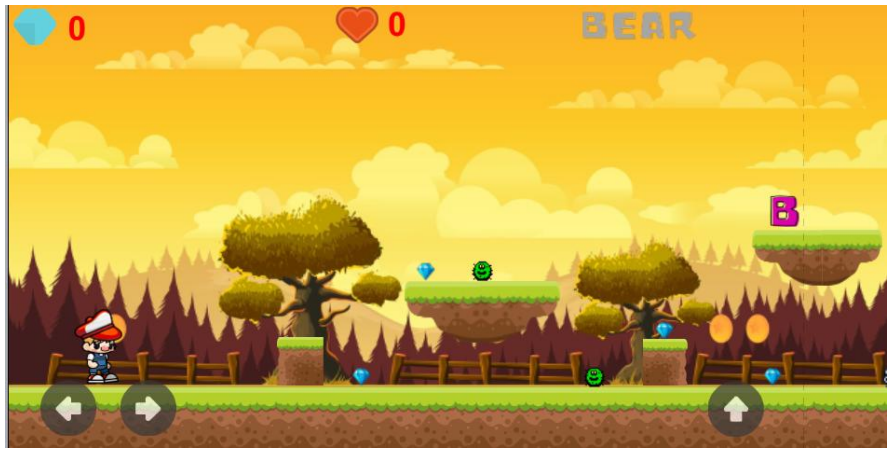

Figure 2. In-game Display

3.2 User Interface (UI)

Figure 3. Main Menu Display

The game interface was designed to be simple and intuitive, especially considering the target audience of children aged 6–12 years. It includes the following components:

1. Play: Starts the game session.
2. Sound: Enables or disables background music and sound effects.
3. Exit: Exits the game application.

4. Info: Displays instructions on how to play *Fauna Fantasi* and the educational objectives.
5. Character Controls:
   a. Right Arrow: Moves the character to the right.
   b. Left Arrow: Moves the character to the left.
   c. Up Arrow: Makes the character jump.
6. Diamonds: Players collect diamonds along the path to increase their score.
7. Letters: Players collect scrambled letters that spell out the English name of an animal.
8. Enemies: Players must avoid these to prevent losing lives.
9. Sound: The game uses cheerful background music to maintain a light-hearted atmosphere that keeps players engaged and makes the game more enjoyable.

By combining these UI elements, the game remains accessible and encourages young players to continue exploring and learning without becoming frustrated.

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3.3 Levels and Progression

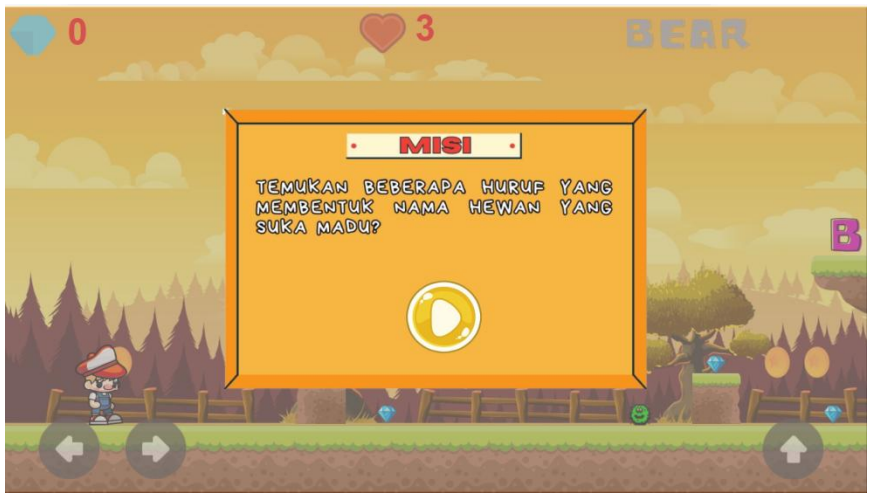

Figure 4. Mission Stage Display

At the start of Stage 1, players see a mission screen that instructs them to find the letters needed to form the name of an animal that enjoys honey. As they progress through the level, they must collect diamonds and avoid enemies. Once all the required letters are collected, players receive feedback that the word "BEAR" has been completed, along with a score summary that reflects the number of diamonds gathered.

Figure 5. Stage 1 Complete Display

Players can then press the right arrow button to move on to Stage 2. The next level builds upon the same mechanics but increases the level of difficulty by introducing more enemies and placing letters in harder-to-reach locations. This design ensures that players remain challenged and continue to improve both their gameplay skills and their English vocabulary.

In Stage 2, players continue with a new mission displayed on the screen. The mission instructs them to find letters that will form the English name of a large wild cat with black-spotted skin that is agile in the forest. The target word for this stage is "LEOPARD." As shown in Figure 3.4, players see a clear mission prompt before beginning the stage, which helps them focus on the specific learning objective.

Similar to Stage 1, players navigate through the game environment, collecting scattered letters while also gathering as many diamonds as possible to increase their final score. However, this stage introduces a slightly more challenging arrangement. The letters are placed in trickier positions, requiring more jumps and careful timing to avoid falling or hitting enemies.

Players must also continue to avoid enemy obstacles, which become more frequent and are positioned to test the player's reaction skills. This gradual increase in complexity is designed to keep the game engaging and to encourage the development of strategic thinking along with language learning.

Upon successfully collecting all the letters that spell "LEOPARD," players are presented with a completion screen that displays their collected score. This reward system reinforces both vocabulary recognition and a sense of achievement.

Figure 6. Stage 2 Mission Display

From early tests with primary school-aged players, the game appears to successfully capture attention and sustain engagement. Children showed excitement in navigating the levels, avoiding enemies, and especially in collecting letters to form the animal's name. The combination of playful visuals, straightforward controls, and the mission-based approach effectively reinforces vocabulary learning.

The game's scoring system, which rewards players for collecting diamonds, also encourages replayability. Players often replay the stage to try to achieve a higher score, further reinforcing the vocabulary through repetition. By gradually increasing the difficulty across stages, the game promotes cognitive growth and problem-solving skills alongside language learning.

From early play sessions, children demonstrated clear excitement in discovering which animal name they would complete next. This staged approach, moving from "BEAR" in Stage 1 to "LEOPARD" in Stage 2, not only maintains interest but also exposes players to a broader range of animal vocabulary.

Furthermore, by embedding language acquisition within increasingly challenging gameplay, *Fauna Fantasi* supports a deeper learning experience. Children must pay close attention to the letters, remember their spelling, and actively engage with the content, which all contribute to better vocabulary retention.

Future implementations of the game could include additional stages featuring different animals, each with unique environmental themes and vocabulary challenges. This would expand the educational scope of the game and continue to support children's English learning in an enjoyable way.

4. CONCLUSION

Fauna Fantasi is an educational game thoughtfully designed to assist primary school children in learning the English names of animals and expanding their vocabulary through the engaging activity of collecting and arranging scattered letters. By incorporating cheerful visuals, intuitive controls, and a progression of levels that introduce increasing challenges, the game successfully captures children's attention and sustains their interest. Observations from early play sessions indicate that players not only enjoy navigating through obstacles and gathering diamonds but also demonstrate heightened curiosity and enthusiasm when uncovering new animal names. The structured missions, such as forming the words "BEAR" and "LEOPARD," embed language learning directly into an interactive experience that feels like an adventure rather than a conventional lesson. To ensure that the game provides both enjoyment and measurable educational value, its effectiveness can be assessed through methods such as pre- and post-game vocabulary tests and close observation of how well children identify and spell the target words during gameplay. Overall, by blending playful exploration with purposeful language learning, *Fauna Fantasi* offers a promising approach to enriching children's English vocabulary in a way that is both entertaining and meaningful.

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