

## **Educational Game Design and Cultural Exploration in “Secrets of the Pharaohs”**

### **Introduction**

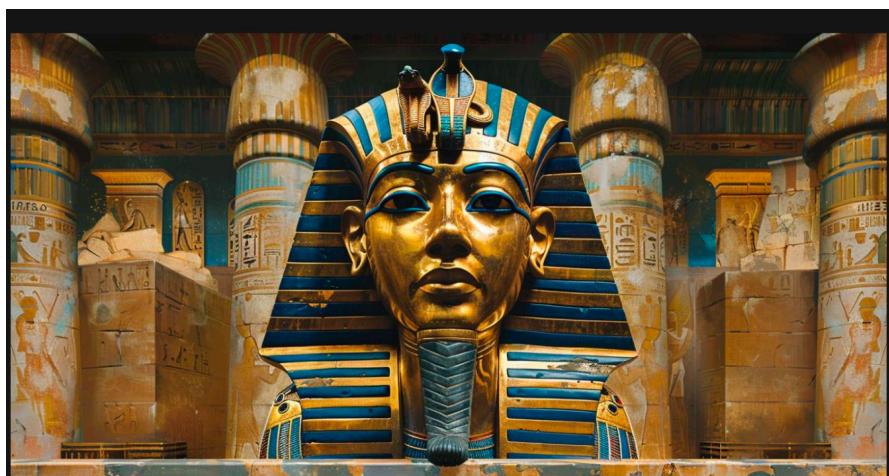
As stated by Coltrain and Ramsay (2019), games can effectively solve problems, stimulate thinking, and promote creativity. In the digital age, games have transcended their conventional role as mere entertainment to become indispensable educational tools (Brown, 2014). With advancements in technology and evolving societal needs, there's been a paradigm shift in educational approaches and content (Dieleman & Huisingsh, 2006). Within this context, “Secrets of the Pharaohs” is designed not only as a digital game based on PC and mobile devices (such as iOS and Android), but also as a means of promoting creativity, critical thinking, and knowledge dissemination.

This digital game aims to combine culture, history education and entertainment purpose. It exemplifies the transformative power of serious games in education, immersing players in the mysteries of ancient Egypt through the discovery of lost artifacts hidden within the Cairo Egyptian Museum, including Tutankhamun's golden mask. Players will be both entertained and educated by the captivating storylines and crafted chambers, each representing different themes and periods of ancient Egyptian civilization. Through puzzles and exploration, players will gain insights into various facets of ancient Egyptian culture, exploring topics such as mythology, religious beliefs, social structures and Egyptian art.

### **Game Background and Setting**

#### **Background**

The setting of “Secrets of the Pharaohs” is the Cairo Egyptian Museum, a repository of countless priceless artifacts from ancient Egypt. Nestled within the bustling streets of Cairo, this museum stands as a beacon of cultural heritage, preserving the remnants of a civilization shrouded



**Figure 1. The Cover of the Game**

in mystery and intrigue. Within its hallowed halls lie relics that whisper tales of pharaohs, gods, and the enigmatic rituals of a bygone era.

## Target Audience

The audience for “Secrets of the Pharaohs” includes players interested in ancient Egyptian history and culture, fans of puzzle-solving and adventure games, as well as individuals who seek to learn new knowledge through gaming.

## Main Tasks for Players

Amidst the treasures housed within the museum, a mystery unfolds as Tutankhamun's golden mask mysteriously vanishes after a power outage. Players take on the role of an experienced detective, an archaeology graduate tasked with solving this puzzling case. Finding the missing artifact and discovering the long-lost mysteries hidden beneath the museum's floor are the two goals of their mission. Equipped with knowledge and instinct, the player sets out on a thrilling exploration that defies gravity and time, navigating historical corridors to discover the truth.

## Gameplay

The Cairo Egyptian Museum is a labyrinth of corridors and chambers, each imbued with the echoes of a distant past. Within its confines, players encounter four distinct chambers, each meticulously crafted to represent a different facet of ancient Egyptian civilization. From the grandeur of the Pharaoh's Treasure Room to the solemnity of the Mummy's Curse Chamber, each chamber offers a unique glimpse into the rich tapestry of Egyptian culture and mythology.

As players traverse these chambers, they encounter a series of puzzles and challenges intricately woven into the fabric of the museum's narrative. These puzzles draw upon elements of history, culture, and mythology, requiring players to employ deductive reasoning, pattern recognition, and lateral thinking to unravel their mysteries. From deciphering hieroglyphics to unlocking ancient mechanisms, each puzzle serves as a gateway to deeper understanding, rewarding players with insights into the customs, beliefs, and practices of ancient Egypt.

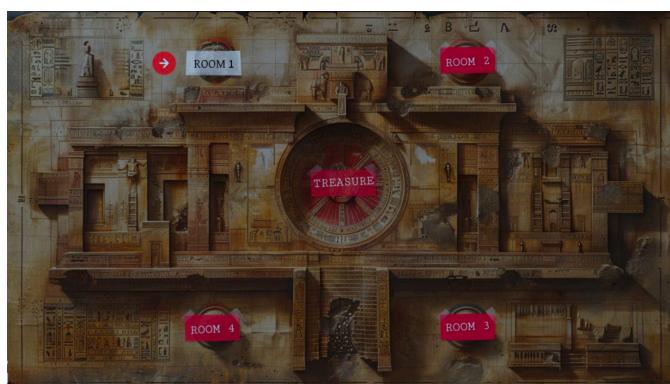


Figure 2. Chambers in the Game

### **Chambers A: Pharaoh's Treasure Room**

The Pharaoh's Treasure Room is a chamber adorned with opulence and grandeur befitting of ancient royalty. At its center rests an ornate Pharaoh's Chest, its surface adorned with intricate depictions of ancient Egyptian gods and symbols. To unlock its secrets, players must decipher the hidden meaning behind these symbols, piecing together the correct combination that will reveal the treasure within. As players get deeper into the chamber, they scour its interior for clues concealed within the ornate murals, sculptures, and exhibits that adorn its walls, guiding players towards the elusive key and partial map concealed within the chest. And then they will unlock the next stage of their journey and be closer to the elusive Tutankhamun's golden mask.

### **Chambers B: Temple's Secret Chamber:**

Within the confines of the museum, a hidden chamber awaits discovery, shrouded in the mystique of ancient temples and sacred rites. Here, players encounter a series of statues depicting the pantheon of ancient Egyptian gods, each bearing significance in the intricate tapestry of Egyptian mythology. To progress, players must arrange these statues in the correct order, aligning them according to the hierarchies and narratives that underpin ancient religious beliefs. Information boards, murals, and hieroglyphs provide valuable insights into the roles and relationships of the gods, empowering players to deduce the correct sequence. Upon successfully arranging the statues, a hidden drawer slides open, revealing a scroll depicting an ancient ritual—a crucial clue that unlocks the path to the next chamber.

### **Chambers C: Mummy's Curse Chamber:**

In the dimly lit confines of the Mummy's Curse Chamber, players confront the eerie remnants of ancient rituals and burial practices. Here, mummies and hieroglyphs line the chamber walls, their silent guardianship concealing the secrets of the past. To progress, players must decipher the cryptic hieroglyphics, unraveling the enigmatic messages encoded within. Each inscription in this room offers a piece of the puzzle, guiding players towards the hidden passage that leads to their ultimate goal. With each deciphered symbol, the veil of mystery surrounding Tutankhamun's golden mask begins to lift, beckoning players towards their final destination.

### **Chambers D: Astrologer's Observation Room**

Players find themselves in the Astrologer's Observation Room, a sanctuary dedicated to the study of ancient celestial phenomena. Here, ancient Egyptian astronomical instruments and star charts adorn the chamber walls, offering glimpses into the cosmos as perceived by ancient astronomers. To unlock the final secret, players must align these instruments to match a specific star pattern, which means this task requires precision and insight. As players manipulate the

instruments, they consult star charts, ancient texts, and celestial alignments, seeking to be closer to their goal. Finally, as the last piece falls into place, the instruments reveal the relic's final hiding place.

## Design Strategy

### Game Design Principles

The historical and cultural background of Ancient Egypt serves as a crucial reference point for the narrative, setting, and thematic elements of "Secrets of the Pharaohs," aiming to serve as an educational tool promoting critical thinking, cultural awareness, and historical knowledge among players. The design principles prioritize a balance between exploration, puzzle-solving, and narrative processes to sustain player interest and immersion. Additionally, attention is directed towards user interface design, hierarchical layout, and visual aesthetics to enhance accessibility and appeal to diverse audiences. Subsequent iterations and updates will focus on incorporating player feedback, analyzing data, and refining game mechanics, narrative pacing, educational content, and technical performance.

### Cultural Criticism Through Gameplay

"Secrets of the Pharaohs" exemplifies the application of rhetoric within the digital gaming environment, showcasing its effectiveness in conveying educational content while engaging players. While visual elements play a pivotal role in creating an immersive gaming experience, the primary focus of the game lies in procedural processes and digital storytelling, rather than mere visual aesthetics. Digital rhetoric explores how traditional persuasive strategies adapt to digital environments, a concept evident throughout the game. By immersing players in an interactive narrative experience, "Secrets of the Pharaohs" encourages players to delve deep into the mysteries of Ancient Egypt. Through interactive storytelling and educational objectives, the game effectively fosters active learning experiences within the digital realm. Furthermore, the game employs procedural rhetoric, crafting persuasive arguments through its inherent gameplay processes. Players navigate challenges such as puzzle-solving and hieroglyph deciphering, which serve as persuasive mechanisms guiding them towards a deeper understanding of Ancient Egyptian culture and history. These procedural actions immerse players in thematic exploration, reinforcing educational objectives through interactive engagement. Additionally, the game prioritizes gameplay rules over narrative elements, emphasizing how these rules manifest within the gaming environment. Through puzzle-solving and exploration, players actively engage with the game's content, enhancing their understanding of Ancient Egyptian culture and history and effectively conveying thematic content and educational objectives.

## **Implementation Steps**

### **Content Research and Development:**

Conduct comprehensive research on ancient Egyptian history, culture, mythology, and artifacts to ensure authenticity and accuracy in the game's narrative and thematic elements.

Develop engaging storylines and thematic chambers that reflect different aspects of ancient Egyptian civilization, integrating educational content into gameplay.

### **Game Design and Prototyping:**

Collaborate with game designers, artists, and developers to create atmospheric audio and immersive digital environments.

Optimize game mechanics, puzzle designs, and interactive elements to ensure they align with educational objectives and promote critical thinking.

### **User Interface and Accessibility:**

Design intuitive user interfaces (UI) and controls that cater to both PC and mobile platforms (iOS, Android), ensuring accessibility for diverse audiences. Meanwhile, implement language localization to accommodate players from different linguistic backgrounds and abilities.

### **Educational Integration and Playtesting:**

Integrate educational content seamlessly into gameplay mechanics, leveraging puzzles, exploration, and narrative elements to foster active learning experiences.

Conduct playtesting sessions with target audiences to gather feedback on game mechanics, educational effectiveness, and overall player experience.

### **Iterative Development and Optimization:**

Analyze playtest feedback and gameplay data to identify areas for improvement and refinement.

### **Launch and Community Engagement:**

Plan and execute a strategic launch campaign across digital platforms, leveraging social media, press releases, and community outreach to generate interest and awareness.

Foster community engagement through forums, social media groups, and live events to cultivate a dedicated player base and gather ongoing feedback for future updates.

### **Post-launch Support and Updates:**

Provide ongoing support, updates, and content expansions post-launch to maintain player engagement and extend the longevity of the game.

Monitor player interactions, metrics, and community discussions to inform future development cycles and content roadmap.

## **References**

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