

MOBILE GAME DESIGN BASED ON TURKIC AND MONGOL MYTHS

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Abstract

Mythology, as a concept that includes all elements of oral and written tradition, has an important value in reflecting the cultural heritage of societies. While mythology may differ from society to society, it is also known that similar mythological elements are seen or adopted in other geographies. The fact that the cyclops is referred to as "Cyclops" in Western mythology or the image of the unicorn frequently takes place in world mythology are examples of this situation. The fact that mythology finds meaning as an artistic and design value is an issue that should be emphasised. Looking at examples around the world, it can be seen that many game productions are inspired by elements of mythology. It is seen that Miyazaki has created many productions inspired by Japanese myths. Greek mythology is also frequently used in European comic cinema. It is possible to say that the productions developed around Turkish mythology in Turkey are inadequate compared to other examples in the world. In this sense, it seems that Turkish mythology is not used sufficiently in the fields of art and design. In line with this deficiency, it is aimed to develop a mobile game based on Turkish and Mongolian epics. In this way, values of Anatolian and Turkish culture will have the opportunity to be represented through current technological methods. Computer aided modelling, animation and game software were used as methods. Based on the literature review, designs were made based on the descriptions of the characters in Turkish and Mongolian myths.

Keywords: Mythology, design, game, interface design, character design.

TÜRK VE MOĞOL EFSANELERİNE DAYALI MOBİL OYUN TASARIMI

Özet

Mitoloji, sözlü ve yazılı geleneğin tüm unsurlarını içinde barındıran bir kavram olarak toplumların kültürel miraslarını yansıtmak noktasında önemli bir değere sahiptir. Mitoloji, toplumdan topluma farklılık gösterebildiği gibi benzer mitolojik öğelerin başka coğrafyalarda görüldüğü ya da sahiplenildiği de bilinmektedir. Tepegözün Batı mitolojisinde "Kiklop" olarak anılması ya da tek boynuzlu at imgesinin dünya mitolojisinde sıklıkla yer edinmesi bu durumun örnekleridir. Mitolojinin sanat ve tasarım değeri olarak anlam bulması önemle üzerinde durulması gereken bir husustur. Dünya genelindeki örneklere bakıldığında pek çok oyun yapımının mitolojiye dair unsurlardan beslendiği görülmektedir. Miyazaki'nin Japon mitlerinden esinlenerek birçok yapıma imza attığı görülmektedir. Avrupa çizgi sinemasında da Yunan mitolojisi sıklıkla kullanılmaktadır. Türkiye'de ise Türk mitolojisi ekseninde geliştirilen yapımların, Dünya'daki diğer örneklerle kıyaslandığında yetersiz kaldığını söylemek mümkündür. Bu anlamda Türk mitolojisinden yeterli ölçüde sanat ve tasarım alanlarında faydalanılmadığı görülmektedir. Bu eksiklik doğrultusunda Türk ve Moğol destanlarını temel alan bir mobil oyun geliştirilmesi amaçlanmıştır. Bu şekilde Anadolu ve Türk kültürüne ait değerler güncel teknolojik yöntemler üzerinden temsil edilme imkânına sahip olacaktır. Yöntem olarak bilgisayar destekli modelleme, animasyon ve oyun yazılımları kullanılmıştır. Literatür taraması üzerinden Türk ve Moğol mitlerinde yer alan karakterlere dair betimlemeler temel alınarak tasarımların yapılması yoluna gidilmiştir.

Anahtar Kelimeler: Mitoloji, tasarım, oyun, arayüz tasarımı, karakter tasarımı.

1. Introduction

Turkish-Mongolian narratives and epics, some written sources (especially Dede Korkut) give clues about the history of Turkish culture. However, the diversity of character design examples based on Turkish culture is limited due to the lack of adequate representation in the game and animation world. In contrast, it is possible to access miniature artworks in terms of visual resources.



Figure 1. *Sennace*, miniature character of the eighteenth century (Aydoğan, 2023, 27).

These works can be considered as a large universe designed with reference to their reflections in the cultural memory of Turkish communities, travel literature in Islamic cosmography, and sources such as the Quran, hadith collection, *israiliyyat* and *qazisü'l-enbiyâ*. These works, which attempt to describe visible/invisible beings, are also related to fields such as astronomy, biology, geology, medicine and zoology (Coşkun, 2023, 19). It is possible to say that the works are inspired by or contribute to the mythologies of communities located on the geographical migration routes of the Turks or in nearby regions (Greek, Indian, Far Eastern). For this reason, for example, the dragon cult stands out as an influential figure in both Turkish sources and sources in the Far Eastern geographies.

These characters, which are shaped through the concepts in the minds of communities as supernatural beings, are defined together with Mount *Kaf*, which functions as the "land of fairy tales" in the Turks. Mount *Kaf* plays the role of a cosmos of fairy tales and consists of intertwined worlds and inter-worlds (Aydoğan, 2023, 27). For example, the monster named *Sennace* is depicted as one of the supernatural beings of Mount *Kaf* as in Figure 1. Hybrid animal forms such as angels, multi-headed monsters, and dog-headed people, which make up the universe of Turkish mythology and are depicted in the post-Islamic period (especially in the 17th century and later), can be seen as various examples adapted from Turkish narratives and epics as in Figure 2 & Figure 3.



Figure 2. Angel (Coşkun, 2023, 18) (left) and dog headed people, Kazvîni, 1695 (Aydoğan, 2023, 25) (right).



Figure 3. Dragon, Kazvîni, 1695 (Coşkun, 2023, 19) (left) and seven headed sea monsters depicted at the end of seventeenth century (Yazar, 2023, 35) (right).

Mount *Kaf* and its assets are an enriching element of Turkish epics and narratives. So much so that it is possible to think of these examples as buried treasures of social memory. In the stories of the journeys to Mount *Kaf* but passing through different lands each time, dragons, giant crabs, giants with pig heads, elephant ears and lion claws, creatures, demons, angry witches, etc. are mentioned (Aydoğan, 2023, 24).

2. History of Mobile Games

Gaming is the basic building block that enables human beings to acquire developmental characteristics at the beginning of life. Gaming, which plays an important role in gaining competence on the path to becoming an individual (Egemen, Yılmaz & Akil, 2004:39), is an activity that exists even in the earliest periods of humanity. This form of self-expression, which carries an element of fun, is an inevitable process that contributes to the development of individuals at all levels, not only for babies and children. Similar with everything that evolves, the game has gone through different processes throughout the ages and diversified in parallel with technology. Various physical competitions such as athletics in ancient civilizations, knight tournaments in the Middle Ages, strategy games such as chess in the enlightenment period, board and card games in the modern period, and digital games today have attracted great attention. As technology progresses, portable games that do not require physical strength have become

more common rather than physical games. Although there are a wide variety of games with different types of topics and mechanisms, since the project the researchers are developing is in the "war game" category, this section will continue by focusing on the change of war games.

The origins of chess, a type of war game based on tactical thinking, date back to Chaturanga, which appeared in India in the 6th century. Chaturanga which means four in Turkish, takes its name from the fact that the Indian army units consist of four parts. Another game that can be shown as one of the oldest portable examples throughout the process of war games coming from arenas to the phones in our pockets is the card game called The Draft Enforced, which is a role-playing game in which recruits are given orders (Coleman, 2018). The 1913 book *Little Wars*, a rulebook for tabletop miniature war games played using small soldier figurines, was written by H.G. Wells and it helped to popularise such games.

Many games at that time were designed for the military audience but were not intended for the general public. Relatively easier games tended to emphasise entertainment for bourgeois society, while more complex games tended to emphasise education for young officers (Schuurman, 2017). *Warhammer*, a mediaeval-themed miniature war game was one of them.

While the theme of war was becoming more prevalent in the mid-20th century on games, the space the games occupied on the table was also shrinking. On the other hand, the rise of computer and video games accelerated the evolution of war games. *Spacewar* (1962), the pioneer of war-themed video games, is a production about the fight of two spaceships against each other and can be considered one of the first computer games. Gameboy, the first mobile game platform released in 1989 (Ertuğ, 2021), gained great momentum with the *Tetris* (1984) game, which attracted attention with its simple gameplay.

The ever-increasing interest in mobile war games occurred towards the 2000s, with the widespread use of smartphones and the growth of the mobile gaming industry. Early mobile games had simple graphics and controls and were often derived from classic games like *Tetris* and *Snake*. Mobile games were limited due to the limited processing power and screen size of mobile phones (Deterding, Dixon, Khaled & Nacke 2011). In compatibility with the increase in communication technologies and devices such as Apple's iPhone in 2007 and Google's Android operating system in 2008, smartphones have revolutionised the mobile gaming industry. Therefore, although the 2003 real-time strategy game 'Warfare Incorporated' is one of the early examples of a war-themed game on mobile devices, its popularity in this field began in 2010 and later.

The opening of application stores such as the App Store and Google Play Store has enabled mobile games to reach wider audiences (King, Delfabbro & Griffiths, 2010). The mobile gaming industry has grown rapidly after the success of the App Store. During this period, new technologies such as touch screens, high-resolution graphics and fast processors began to offer more opportunities to mobile game developers. In 2012, mobile games started generating more revenue than all video games combined. This shows that mobile games have gained a significant place in the video game industry. Since 2013, the "freemium" model has dominated the mobile gaming industry. While players can download the game for free, a system where they can progress with in-game purchases has been

developed and a new page has been opened in the history of mobile games. While this model offers game developers the opportunity to generate constant income, it also gives players the freedom to try the game and spend as much as they want. Additionally, microtransactions have become an important part of this period, and the sale of various items, characters or boosts have shaped in-game economies (Statista, 2023). With the development of mobile games in recent years, methods have been tried in different areas. Developers are working to deliver higher quality graphics, better playability and deeper game mechanics. The change in graphic and game design structures can be observed with the 2017 tower defence game Castle Creeps. Mobile games also reflect other developments in the gaming industry. As an example, augmented reality (AR) and virtual reality (VR) technologies are being integrated into mobile games. These technologies allow players to be more involved in the game world and have a more realistic experience. Mobile games also have significant social and cultural impacts and contribute to globalisation. It encouraged players to interact with the physical world and became a part of popular culture. Additionally, mobile games strengthen social bonds. It brings communities together to increase competition among friends.

Mobile games have undergone a massive transformation as a result of technological advances and the changing gaming business model. From the first simple games to graphically rich and complex games, this industry is becoming more and more diverse. It is thought that mobile games will continue to be important as a reflection of technology and culture in the future. In particular, the integration of augmented reality and virtual reality technologies into mobile games will play a major role in the future development of mobile games. Undoubtedly, mobile games will continue to evolve by attracting more players by offering more social features and deeper game mechanics.

2.1. Turkic and Mongol Mythologies

In order to make sense of nature and existence in nature structurally, humans have not refrained from attributing qualities to each structure of nature with which they interact. Turks have always been integrated with nature, a feature brought about by the lifestyle they lead. Therefore, by adapting to the environment they lived in, they transferred their own temperament to these geographies (Uzun, 2022). Use Shamanism as a belief system. Since the Turks have a nature-based religious structure, natural events, astronomical elements such as the sun, moon, stars, animals and plants formed the basis of Turkish mythology (Uzun, 2022). The nomadic lifestyle of the Turks has been a factor that enriches their mythology by providing them with an advantage in spreading to different geographies and interacting with other cultures. Turkish tribes migrating from Central Asia were able to add new elements to their mythological formations by migrating to Anatolia, the Middle East and other parts of Central Asia. Turkish mythology has been transferred to the present day through epics, tales and legends and has evolved from generation to generation. Mongolian mythology, which includes the belief systems they developed in the geographies they settled in, was shaped by the cultural history and interactions of the Mongols in the steppes of Central Asia. The common cultural foundations of Turks and Mongols enabled them to use many motifs together in the mythological narrative (Yılmaz, 2022). Therefore, it is possible to see similarities in the mythological data of the two societies. Therefore, there are elements such as shamanistic beliefs and heroic stories in Mongolian mythology. For example, in both mythologies, there are animistic belief elements in which inanimate objects are

thought to have some kind of soul. Despite this, although the two cultures have interacted with each other specific to their geography, they have differentiated and developed and have unique narratives. Mythological characters have different qualities and roles, narrative language, etc. The elements are nourished by the cultural context coming from the society.

3. Turkish and Mongolian Epics: Mobile Game Adaptation

The game requires players to collect resources, defend their territory, make strategic decisions and fight enemies. The aim of the game is to explore the areas on the map given to the player and to protect the soldiers given to the player while doing so. Each player is given a commander when starting the game. As the game progresses, new commanders are obtained with the captured areas. The game operates with the logic of strategically fending off enemy attacks. The most important factor at this point is to intervene against enemy soldiers at the right points. It is similar to other strategy games, Bad North and Age of Empires, in that it is based on area defence. As a strategic game based on area defence in Bad North, it was one of the games that inspired the design of the Turkish and Mongolian epics based mobile game.

The game consists of residential areas with main buildings such as tents, castles and tents. In this respect, it is similar to Age of Empires. There are important buildings such as Town Center and Wonder in the Age of Empires game. The game also shows similarities in terms of its objectives. The main purpose of the Age of Empires game is to reveal the right strategies to collect resources, develop them and win wars (Kılıç, 2021).

3.1. Character Design

The game's characters are designed using vibrant and distinctive colours. This design approach is inspired by the games Clash of Clans and Castle Creeps. However, it has been enriched with touches that draw attention to the Turkish-Mongolian theme by using unique details.

During the mobile game production process, the skin colour of the character design, the colour of the costume and accessories, and the colour selection of all other visual elements play an important role in preserving the conceptual integrity of the game. In general, colours have many psychological effects such as warmth, coldness, activity, passivity, joy and sadness, depending on their type, value and saturation. (Özden, 2017)

Even though the game is a strategy game, it contains war. Thus, the characters were designed with battle costumes and weapon accessories. Thanks to the costumes and accessories, the player is given information about the game. In mobile platform games, the small screen means that the costume cannot be seen fully (Özden, 2017). For this reason, care was taken to use as little as possible complex details that would have unnecessary effects on the characters' costumes. Characters are designed using as few polygons as possible. This is also seen in their accessories and weapons. At the same time, attention was paid to the physical structures of the characters, considering their movements in the game.

3.1.1. Tepegoz

Tepegoz is a mythological character, especially in Turkish and Central Asian mythologies. Although there are many different stories and legends known about the Cyclops, the character is generally depicted as a large and scary creature with only one eye. When we look at Turkish mythology, it is considered a creature that harms people. It raids villages, eats animals and scares people. All these legends emphasise the evil and dangerous nature of the Cyclops. In the game, Tepegoz appears as one of the main enemies.

The character was designed as a one-eyed, large and scary creature, in line with the depictions in the stories. Character created in a humanoid form; It is supported with accessories such as earrings, armbands and belts. Grey tones were predominantly used in clothes and accessories.



Figure 4. Tepegoz, three dimensional design of the character.

3.1.2. Commander

Commander was designed as a character with long hair, white skin and sharp facial features. Golden yellow and blue tones were generally used in their clothes. Characters using more relaxing colours such as blue and grey create a feeling of serenity and confidence. In mobile games, this colour scheme varies depending on the game type. Blue and grey colours are mostly used in strategy games (Özden, 2017).



Figure 5. Commander in three dimensional software.

3.1.3. Secondary Commander

Secondary commander character is designed by his long brown hair, prominent eyebrows, and facial features inspired by a realistic human face. His clothes are mainly in green tones.



Figure 6. Secondary commander in three dimensional software.

3.2. User Interface (UI) Design

The priorities of the mobile game construction phase is that elements such as the structure, rules, scenario, characters, objects and elements of the game are planned, and the interface design should proceed in coordination with this process (Keş & Kara, 2015). Postponing the interface design by seeing it as the last stage to be completed is one of the mistakes that can be made during the process. This situation causes errors in game dynamics to be noticed late and delays in meeting the end user. Based on this, as stated by Fox (2004), interface design should be determined as

an important mechanism in the mobile game development process and should not be positioned separately from the game. Therefore, the game developed by the researchers progresses with the process and since it has a theme containing mythological elements, icon designs, typography and these elements were designed with attention to harmony.

3.2.1. Loading Page UI

In the loading page of the game, the illustration of Bartu Bölükbaşı (2022), who undertook the 2D designs of the game, was used as a background, and shadow and colour adjustments were applied to make the font and loading icon easily visible. An attempt was made to give the time bar a mystical appearance, inspired by mythological symbols. Mythology of Egypt, which was chosen considering its suitability to the theme and readability, was used as the font and was determined as the main font as in Figure 7.



Figure 7. Loading page UI

3.2.2. Main Menu

Simple action instructions and clear icons are used along with the base font selected in the game's main menu. It is aimed to minimise incomprehensibility in the text read or an icon on the screen. Icons and texts are placed on stone plates decorated with decorative shapes reminiscent of ancient or ancient times. Considering the users who may accidentally come to the main menu during the game, a more transparent background was preferred, which will ensure that the player does not lose touch with the game, compared to an opaque background. This usage prevents the player from worrying that he has gone to a different page and aims to direct him to continue playing by clicking anywhere on the screen in Figure 8.



Figure 8. Main menu of the game.

3.2.3. Game UI

The screen where the game action takes place is the only interface that provides access to every mechanism the game offers. These mechanisms are represented by icons that allow the player to navigate to the relevant interface. The icons placed in the area, taking into account their compatibility with the theme and each other, must also be in the right place for the interface to work. Therefore, it is important to examine icons and locations by researching different games.

Using similar layouts and associations in interface design gives the player an easier experience. Considering this issue, the game's character information, game level, map and rule/task booklet are listed one under the other on the left side. On the right side, there is a gold and crystal indicator that provides access to items that make it easier for the user to improve his strategy and level up. The "+" symbol on the same icon directs the user to the play market to purchase gold and crystals. Next to it, the game exit and settings icons are created with a stone plate design, which is also used in the main menu and theme as in Figure 9.

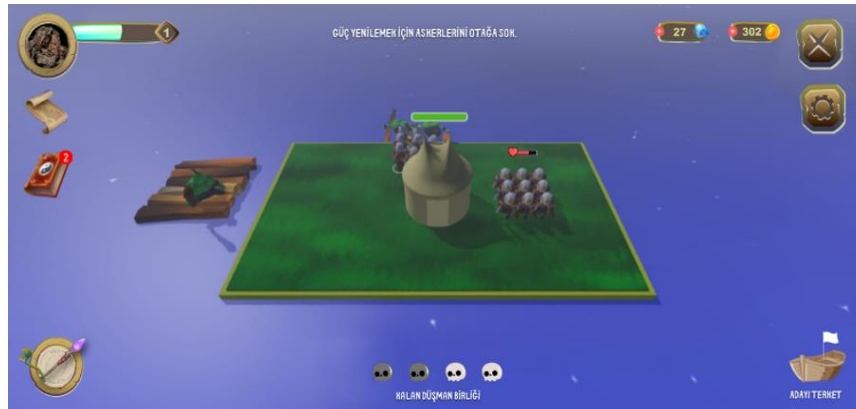


Figure 9. Some sections of the game's user interface.

Other placements that the user will follow intensively during the game action are; attack button, enemy indicator, instructions and escape icon. The icon located on the lower left edge is an action button that allows the player to use

powers and features that enable attack/defence. The stone plate used with other icons in the theme is designed here in combination with a shaman/sorcerer wand as a background. An escape button has been added on the lower right edge so that the player can leave the battlefield without losing his soldiers. Instead of just using an icon, an action directive was added under the icon, and its meaning was clarified and strengthened.

The number of enemies that continue to arrive in the middle bottom part of the screen is intended to be determined by the indicator. Since the enemy is an evil that the player wants to destroy, the skull was used in this placement. The aim of the light and dark colouring is to make the number of remaining enemies more understandable to the player.

In the upper middle part of the screen, there is an information and instruction text that teaches the game and gives tactics to win during the war. Reducing the time spent trying to learn the game and understandability were taken into consideration because mistakes made during learning can give users a negative experience or perception of difficulty.

4. Conclusion

Within the scope of this research, it is aimed to develop a mobile game character and interface design based on Turkish and Mongolian narratives and epics. In this regard, sample mobile and computer games were examined, and game examples based on strategy and development were primarily discussed. Although there are examples of Ottoman-themed games in the context of representing Turkish cultural values, only a few examples centering on pre-Islamic Turkish culture and values have been encountered. Considering the abundance of mobile games with Greek-Roman or Ancient Egyptian content, the necessity of developing new and creative games with content that reflects the Turkish cultural world should be seen as a necessity.

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