



Research Article

**THE USE OF ARTIFICIAL INTELLIGENCE BASED PRODUCTS IN THE CONTEXT OF
TOURISM: THE EXAMPLE OF ASSASSIN’S CREED ORIGINS****

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Abstract

The lifestyle brought about by the age of digitalization is seen as an important factor that affects the tourism industry today. Researchers have tried to contribute to this situation by giving suggestions with artificial intelligence-based applications that can be used in the tourism industry. This research aims to reveal how video games, which are artificial intelligence products, affect the travel desires of young generations and whether these elements can be used for tourism purposes. Accordingly, the Ancient Egypt Discovery Tour section of the Assassin’s Creed Origins (AC) game has been preferred. The qualitative research method and interview technique were used to find an answer to the main problem of the research. As a sample, university students representing the digital age were preferred. 30 students from 3 different faculties studying at Zonguldak Bülent Ecevit University Kepez Campus were interviewed face-to-face. The data obtained through the interview form were divided into categories and classified as pre-game experiences and post-game experiences. As a result of the research, the participants stated that their desire to travel to Egypt increased compared to their desire to travel before the game, and their interest in Egypt increased by developing a positive attitude towards Egypt.

Keywords: Artificial Intelligence, Digitalization in Tourism, Video Games, Assassin’s Creed

Introduction

It is an inescapable fact that technology makes human life easier. This reality has become an indispensable part of daily life, becoming an indispensable element for people not only in their working life but also in their private life. This element, which we call the age we live in, has become a phenomenon closely followed by all sectors. Nowadays, especially among young people, it seems that there is a strong demand for what is phenomenal or anything that tends to become a phenomenon. The fact that young generations make sense of life in the form of “find, follow and adapt the phenomenon” has become a situation that we frequently encounter today as the digital lifestyle brought about by the digital age.

It is possible to say that technological developments and digital lifestyle have changed not only the lifestyles of consumers but also their preferences and habits. It can be asserted that the majority of today’s youth, compared to previous generations, tend to adopt a lifestyle characterized by spending more time at home and showing a preference for avoiding extensive engagement in social and physical activities. It is thought that the lifestyle brought about by the age of digitalization will be a significant problem that may affect the demand and supply of the tourism industry today and in the future. In this research, it has been tried to search for answers to the problems that technological innovations and digitalization put into our lives, again with technology and digitalization.

The rapid spread of technology and the ease of access to the Internet bring about a rapid increase in the time spent online and on the Internet. In 2013, the time spent online was over 330 minutes, while the time spent in front of the Internet was 99 minutes per person. In 2019, the time spent in front of the internet was 171 minutes

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per person and the time spent online exceeded 390 minutes (Johnson, 2022; Johnson, 2021). The spread of the Internet has not only resulted in an increase in the amount of Internet usage but has also significantly changed daily life and communication styles during the day. With the popular social media applications, it is seen that people spend more time on the internet, so the time they spend on social activities decreases. It has been observed that women use the Internet to avoid being excluded from digital communities, while men are often isolated from social communities to spend time on video games (Tateno et al., 2019). When these data are taken into consideration, it is seen that especially the young generations continue their lives in a digital world. Against this situation, the tourism sector has also started to digitalize many elements such as the reservation process, customer service, and especially promotional activities and to offer them to the users. Considering that online channels account for more than 61% of the marketing budget in the field of tourism today, it can be said that a large part of both supply and demand is circulated through digital markets (Loo, 2017).

The research aims to determine how video games, which are artificial intelligence (AI) products, affect the travel desires of young generations, and whether AI-based elements can be used for tourism purposes. In line with this purpose, answers were sought to the questions of whether the video games in AI-based applications affect the motivation to travel (a), whether the elements shown throughout the game are realistic (b), whether the tourism elements in the game are noticeable (c), whether the information about these elements is sufficient (d), whether the game is interesting (e), and whether it causes a change in the existing views about Ancient Egypt (f) in the research. In addition, it is aimed to determine the general opinions about the game and the opinions about implementing similar applications in the world and Turkey.

Theoretical Background

The Concept of Artificial Intelligence

Before defining the concept of AI, it is necessary to define the concept of intelligence. Although emphasizing its different aspects, intelligence is expressed as the ability to learn, understand and make judgments or to have opinions based on reason and mind (Cambridge Dictionary, 2022). From a broader perspective, intelligence can be defined as a general mental ability for reasoning, problem-solving, and learning. By its general nature, intelligence is the set of cognitive functions such as perception, attention, memory, language, or planning (Colom et al., 2010). Breakspear (2013) focused on the predictive ability of intelligence. According to the researcher, intelligence represents talent, foresight, high cognitive capacity, and the processes of being able to use it to his advantage by foreseeing opportunities that may be useful to him. Tegmark, who said that there is no single and undisputed definition of intelligence, mentioned that the literature contains a level of accuracy that can compete with each other for the definitions of intelligence. According to the researcher, intelligence includes components of many factors such as logical capacity, comprehension, planning, emotional knowledge, self-awareness, creativity, problem-solving ability, and learning and the researcher formulated this state as “intelligence = the ability to achieve complex goals” (Tegmark, 2021).

When the definitions made on AI are examined, it is seen that three different aspects of AI systems are emphasized by the researchers. The first group of researchers (Legg and Hutter, 2007a; Legg and Hutter, 2007b); emphasizes AI with human capabilities and intelligence. According to these researchers, AI refers to the ability of the machine, which is questioned whether it is intelligent or not, to succeed according to some goals or objectives, in short, the behaviour of the machine. Researchers are guided by the view that if the machine can exhibit the same behaviours as a human, the machine is considered intelligent. AI enables machines to perform tasks that require intelligence like a human (Magoulès and Zhao, 2016). According to Nabiyevev (2012), AI is the ability of a computer or computer-controlled machine to complete the processes of mental activity that are identified with man, such as reasoning, making sense of it, and gaining experience from past acquisitions. Telli (2019), on the other hand, describes artificial intelligence as one of the solutions developed by humanity to delegate tasks and responsibilities that individuals are expected to carry out in their daily lives. Another group of researchers (Bolonkin, 2011; Dobrev, 2012; Kutlusoy, 2019; Say, 2021) emphasized that AI systems are above human capabilities. Bolonkin (2011) states that AI is a system that perceives its environment and performs actions that maximize the chances of success.

The Concept of Digital Game

The digital game is the general name given to electronic games played through devices that are capable of electronic operation such as computers, game consoles, mobile phones, and tablets. As of 2021, digital games, which are common to 3.24 billion people worldwide, continue to grow day by day and are becoming a hobby

that everyone enjoys regardless of age. In 2020, it is estimated that the revenue generated by this hobby to the computer and mobile game sector was over \$ 110 billion (Clement, 2021a; Clement, 2021b).

It is seen that digital games, which are presented to a very wide audience and brought out to their liking, are classified according to many features today. One of them is the classifications made according to the type of devices on which the game is played. In this classification, it is seen that digital games are divided into categories such as computer games, console games, and mobile games (PS, 2015). Another form of classification is the separation of games based on the type they offer to the user. In this category, digital games include action, adventure, fighting games, games with the first-person camera angle, flight games, party, platform, puzzle, racing, real-time strategy, role-playing, simulation, sports games, strategy, games with the third-person camera angle, turn-based strategy, war games and wrestling (Metacritic, n.d.).

The studies based on AI and video games in tourism (Bowen and Whalen, 2017; Bowen and Morosan, 2018; Bozkurt Uzan and Sevimli, 2020; Casey, 2021; Çerkez and Kızıldemir, 2020; Dubois and Gibbs, 2018; İbiş, 2019; Oğuz, Kızıldaş and Yılmaz, 2021; Rainoldi et al., 2022; Reis, et al., 2020; Roseta et al., 2020; Ruel and Njoku, 2020; Shaheer, 2022; Tuo, Ning and Zhu, 2021; Yıldız, 2019; Zeren and Paylar, 2016) has been quite limited compared to other areas. The results of these studies are given below.

Rainoldi et al. (2022), mention that the potential of video games in tourism marketing is underestimated. This research, which investigates how in-game experiences and interactions affect the intention to visit destinations, suggests that video games provide a great marketing opportunity for tourism. In the research carried out by Oğuz et al. (2021), in which 750 people participated, it was tried to determine how online games affect the intention to buy a vacation. It has been determined that online games increase the holiday purchase intention of users in a positive and meaningful way. It has been seen that one of the important reasons for this positive increase is the real or real-inspired locations in the games. Casey (2021), in his research on the ancient Egypt discovery tour mentioned that experiences are more successful than books in terms of learning and the effect of experience in the simulated world of games. Until the AC Origins game, the researcher emphasized that traveling to Ancient Egypt was only possible with a time machine, and he emphasizes that it is also possible to learn by understanding Ancient Egypt thanks to the information provided in the game. Dubois and Gibbs (2018), analysed 137 comments associated with AC and tourism on Reddit, Ubisoft AC Blog, and TripAdvisor to examine the relationship between video games and tourism. The results showed that video games are a supporting force for tourism, just like movies and books. Dubois and Gibbs added that tourism destinations should invest in video games before investing heavily in virtual reality to increase tourists' motivation to travel. Zeren and Paylar (2016), investigated the recall status, brand perception, brand attitude, and purchase intention of the products placed in the games on 179 users in their research. The research reveals that the participants have 2 to 7 times more intention to buy brands and products that they have previously known about compared to other products. In addition, it is also stated that if the products they want to promote or market are compatible with the game, the users will be more likely to remember the brand and a successful promotion activity can be done in terms of the brand.

General Information About the Assassin's Creed Game

The Assassin's Creed (AC) series is an award-winning video game franchise consisting of twelve main games, seventeen spin-offs, several short films, and various transmedia projects. Although it undergoes minor changes from game to game, AC games are primarily in the historical action-adventure genre, with a strong emphasis on stealth. The AC series is developed by the Canadian studio Ubisoft Montreal and published by the French video game company Ubisoft. Having released numerous games for computers, gaming consoles, and mobile platforms, the AC series achieved a total of 155 million sales from 2007 to 2020 (Andreeva, 2020; Assassin's Creed, n.d.).

Table 1. Games About Information

Game's Name	Year
Assassin's Creed	2007
Assassin's Creed II	2009
Assassin's Creed: Brotherhood	2010
Assassin's Creed: Revelations	2011
Assassin's Creed III	2012
Assassin's Creed IV: Black Flag	2013
Assassin's Creed: Rogue	2014
Assassin's Creed: Unity	2014

Assassin's Creed: Syndicate	2015
Assassin's Creed: Origins	2017
Assassin's Creed: Odyssey	2018
Assassin's Creed: Valhalla	2020

Assassin's Creed, W. (n.d.). Assassin's Creed (series). From: 06.12.2022
[https://assassinscreed.fandom.com/wiki/Assassin%27s_Creed_\(series\)#cite_note-1](https://assassinscreed.fandom.com/wiki/Assassin%27s_Creed_(series)#cite_note-1)

The Discovery Tour mode first appeared as an additional package for the game *Assassin's Creed Origins*. Released in 2017, the Discovery Tour package was made available a year after the game's launch. Today, there are three Discovery Tour games that explore Ancient Egypt, Ancient Greece, and the Viking Age. Through the Discovery Tour series, players can freely roam as if they were tourists in Ancient Greece, Ancient Egypt, and the Viking Age, gaining insights into the history and daily life of those eras.

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"...We wanted to recreate Ancient Egypt. In this process, we ensured the accuracy of the information by verifying the content we created with historians and consultants, and this took years of work. That's why we believe this game can benefit far more people than just players."

Ancient Egypt offers users the opportunity to explore the historical streets of Ancient Egypt or the deserts leading to the pyramids with 25 different character options. Before starting the game, users can choose from various characters such as Cleopatra VII, Egyptian pharaohs, Egyptian merchants, archaeologists, or boys and girls. This allows them to begin exploring Egypt through a personalized experience. Once users select their character and are ready to explore and learn about Egypt, they can navigate to the tours menu. From there, they can choose from tours categorized under five main themes by the game's editors: Egypt (n=20), pyramids (n=16), Alexandria (n=14), daily life (n=20), and Romans (n=5). Each category contains specific tours, providing a total of 75 different topics and destinations. The game offers guided tours that present the traditions, history, daily life, and ancient cities of Egypt to its users.

Visual 1: Ancient Egypt Discovery Tour Character Selection Menu



This is a screenshot obtained by the researcher.

Ancient Egypt offers users the opportunity to explore the historical streets of Ancient Egypt or the deserts leading to the pyramids with 25 different character options. Before starting the game, users can choose from a variety of characters, including Cleopatra VII, Egyptian pharaohs, Egyptian merchants, archaeologists, or boys and girls. This selection allows players to embark on a personalized journey of discovery through Egypt. Once users have chosen their character and are ready to explore and learn about Egypt, they can navigate to the tours menu. In this menu, tours are categorized under five main themes by the game's editors: Egypt (n=20), pyramids (n=16), Alexandria (n=14), daily life (n=20), and Romans (n=5). Each theme includes various tours,

offering a total of 75 different topics and destinations. The game provides guided tours that present Egypt's traditions, history, daily life, and ancient cities, offering users an immersive educational experience.

Visual 2: Ancient Egypt Discovery Tour Selection Menu



This is a screenshot obtained by the researcher.

When a user selects a tour within the game, they must go to the tour's starting point to begin. Once the tour is initiated, the user follows a physically marked path, stopping at specific points along the way to continue the tour with the assistance of an audio guide. Each stop in the game provides unique information and details. Additionally, at certain stops, users can access supplementary content, including additional information and contemporary photographs related to the topic, based on their preferences. The game offers users various options for the audio guide. Depending on the user's preference, the guide can be narrated in either a male or female voice (Reparaz, 2018). This service is available with subtitles in 15 languages and voiceovers in 8 languages, enabling many users to access the content in their native language and better understand the material presented (Steam, n.d.).

Although the *Assassin's Creed Origins* game includes many dubbing and subtitle options, it does not originally feature Turkish subtitles. Considering that not all participants may have a good command of English, it was believed that this could affect the reliability of the data obtained from the research. To address this, discussions were held with companies that add Turkish subtitles to games. As a result of these meetings, Turkish subtitles were added to the game in collaboration with Animus Projesi, a company specializing in game translation. This allowed participants to experience the game in their native language, ensuring accurate analysis.

Visual 3: Ancient Egypt Discovery Tour In-Game Footage



This is a screenshot obtained by the researcher.

Methods

Within the scope of the research, it was tried to find answers to the research problem with the qualitative research method. The main reason for preferring the qualitative method in the research is that qualitative methods provide a suitable infrastructure for the discovery and discovery of new information (Park and Park, 2016). This research holds significance in several respects. Firstly, it addresses a notable gap in the existing literature by focusing on an application—the Ancient Egypt Discovery Tour—that has not been previously examined from an academic perspective. At the time the research was conducted, no research was found that explored this specific application or the experiential and educational dimensions it offers. This makes the research a pioneering effort that may inform and inspire future scholarly investigations in the fields of game-based learning, virtual heritage experiences, and tourism education. In this respect, it is aimed to obtain in-depth information about the questions of the research by using qualitative methods. In order for this process to be carried out successfully, it is necessary to provide participants with information about the basic concepts of the game during the game and to explain the necessary instructions for playing the game.

The interview form consists of 3 sections: Questions about computer usage and gaming habits, questions about pre-gaming experience, and questions about the gaming experience. The participants were directed to, 7 questions about computer use and gaming habits, 6 questions about pre-gaming experience, and 15 questions about after-game experience. In demographic factors, the participants were asked questions such as gender, age, nationality, the faculty they research, the department, and their monthly income. The reason for asking these questions is to determine whether demographic variables have a connection between computer usage, interest in video games, attitudes, and perceptions of A.C. games. In the second part of the interview form, questions about the participants' computer usage and gaming habits were included. These questions are generally about the time spent in front of the computer, the time spent playing games, AC games played, information about the Ancient Egypt Discovery tour, the influence of the language of the game on game preferences, the types of games they prefer to play, and game purchases. The questions directed in this section aim to determine the participants' computer usage, game-playing and game purchase habits and information about the Ancient Egypt game before they experienced it. The third part of the interview form has been prepared to identify opinions about personal experiences before the game. These questions were “trips abroad, desired countries to travel, travel pre-trip research processes, information about ancient Egypt, expectations about the game, books, movies and destinations featured in the games.” The opinions of the participants before experiencing the game were tried to be determined. In the fourth and final part of the interview form, the experiences of the participants regarding the A.C. game were determined. These questions were “game experience, opinions about the game, memorable elements, differences of opinion after the game, post-game information acquisitions, game descriptions, repetition of the experience with different options, desire to visit, way of participating in the game, destination suggestion for the game to be played in Turkey, the realism of the game and information, a summary of the game in three words, the harmony of music, visual reality and game mechanics.” The main purpose of creating these questions was to reveal the general opinion and attitudes towards the gaming experience.

In the research, university students representing the digital age were selected as a sample. 30 students studying at Zonguldak Bülent Ecevit University Kepez Campus were reached. The participants consisted of students from Karadeniz Ereğli Faculty of Tourism, Faculty of Maritime, and Ereğli Faculty of Education. *The necessary permissions were obtained from the Human Research Ethics Committee of Zonguldak Bülent Ecevit University to apply in the context of the research.* The interviews were carried out between the dates of 05.12.2021-23.12.2021 with the permission of the 2014/08-13 numbered ethics committee at Kepez Campus. Given the practical limitations related to accessibility and time, the research sample was confined to students studying at the Kepez Campus of Zonguldak Bülent Ecevit University.

Table 2. Sample Profile

Participant	Gender	Age	Nationality	Income (TL)
Demographic Variables of Students of the Faculty of Tourism				
At	M	21	TC	1000-1500
Bt	M	22	TC	1000-1500
Ct	M	21	TC	1000-1500
Dt	F	26	TC	1000-1500
Et	F	25	KZK	500-1000

Ft	F	22	TC	500-1000
Gt	M	19	TC	500-1000
Ht	F	21	TC	500-1000
It	F	21	TC	1000-1500
Jt	M	22	TC	500-1000
Demographic Variables of Maritime Faculty Students				
Am	M	21	TC	500-1000
Bm	F	21	TC	500-1000
Cm	M	19	TC	500-1000
Dm	M	21	TC	1000-1500
Em	F	21	TC	1000-1500
Fm	M	22	TC	1500-2000
Gm	M	22	TC	1000-1500
Hm	M	20	TC	2000+
Im	M	19	TC	1000-1500
Jm	F	21	TC	2000+
Demographic Variables of Faculty of Education Students				
Ae	M	21	AZ	2000+
Be	M	21	TC	500-1000
Ce	M	25	TC	1000-1500
De	F	23	TC	500-1000
Ee	F	18	TC	1000-1500
Fe	M	23	TC	1000-1500
Ge	M	21	TC	0-500
He	F	22	TC	1000-1500
Ie	M	19	TC	500-1000
Je	M	21	TC	1000-1500

Source: Own elaboration.

As it shown in the Table 1, 19 participants is male and 11 participants is female. Considering their age, the largest proportion of respondents 21 were in 18-22 age range. Highest percent of respondents were between 1000-1500 TL monthly income. The participants' nationality was T.C. mostly.

The interviews with the participants lasted a total of 1495 minutes. 955 minutes of these interviews were spent explaining the game mechanics and playing the game by the participants. The interview was recorded with the approval and knowledge of the participants while the questions in the interview form were being asked. A total of 540 minutes of audio recording data were obtained and it took 132 hours to decipher the audio recordings. Also, photographs were taken in a way that the identities of the participants would not be revealed during the game.

Findings

General Findings about Computer Usage and Video Games

Computer Usage: The average time that participants spend in front of the computer during the day is 272 minutes, while the time they devote to games is 106 minutes. The average time that men spend in front of the computer is 310 minutes, while women spend 224 minutes. When examined on the basis of faculties, the participants of the Maritime Faculty take the first place with 339 minutes. Among the participants of the Maritime Faculty, the female participant playing is Id, in the Faculty of Tourism the participant is Ef, and in the Faculty of Education the participant is Ie.

The Language of the Game: Participants were asked about the effect of English language on their gaming experience. While 18 participants gave the answer that it positively affects the game experience, 11 participants expressed the opinion that it negatively affects the game experience. 1 participant (Gm) replied that he had no idea. When evaluated on the basis of gender, 5 of them are women and 6 of them are men. Here are some of the participants' responses to this question:

"... When I see that the game language is English, I take a step back." (Cm).

"... It would be better for me to play the games in English." (At)

"... English games seem like a more professional production to me." (Je)

Game Preferences: When the types of games that the participants preferred to play were examined, it is seen that 17 participants chose the games with stories, 11 participants chose the online games, and 2 participants (Bm, Gm) preferred none of them.

“... Online games are usually free, and I think they have more enjoyable content. I’ve been playing the same game for 10 years, for example, I never get bored.” (Am)

“... I usually prefer to play games with a story. It’s a little more like books.” (At)

“... Story games are like movies. I feel like I’m the main character in a movie.” (Ae)

Game Buying Habits: When the game purchasing habits of the participants were examined, it was seen that 14 participants did not buy games and 14 participants bought games. Apart from this, 2 participants say that they have accessed the games through illegal sites. Participants who use more than one platform to buy games prefer Steam (n=12), GamePass (n=6), Epic Games (n=6) and PlayStation Store, respectively.

“... I’m using Gamepass a lot right now. It allows me to use a large library of games for 30 pounds per month. I still use Steam, but not as much as I used to, but if a game that is not on Gamepass is discounted, then only then.” (Dm)

“... I don’t have a budget for games. That’s why I’m asking my brother. He downloads games to me for free from the Internet.” (Et)

“... My brother and my boyfriend also come and download games on my computer. There was a free site, I wanted to play Sims, for example, they found it directly.” (Ie)

The Findings of the Participants about the Pre-Game Experience

General Information about the Game: While there were 16 participants who had heard of AC games before, 6 of them stated that they had played AC games before. While the participants were usually informed about the game (n=10) through their friends, 4 participants said that they heard about the game through YouTube and 2 participants said that they heard the game through movies. Among the participants, there are two participants (Gt, Be) who have previously played an Ancient Egypt Discovery tour.

“... My friends suggested the AC game to me first, then I watched it on Youtube and decided to play it.” (Dm)

“... I had friends who had played the game before, they were playing in an internet cafe, I heard about it from them first.” (At)

“... I played AC Origins and Valhalla. I’ve also played the discovery tour episodes of Origins, but not all of them.” (Be)

Information about Ancient Egypt: In the questions directed to the participants about the information and ideas they had previously acquired about ancient Egypt, 14 of the participants stated that they had knowledge, 10 of them had a low level of knowledge, and 5 of them did not have any knowledge. 1 participant (Dt) said that he was interested in this topic and did research.

“... I can’t say I know. I last heard its name in history class at high school.” (Gm)

“... I am interested in Ancient Egypt. That’s why I’m constantly reading or researching something. This topic interests me very much.” (Dt)

“... I know from documentaries, from what I have learned from friends.” (Je)

Expectations about Ancient Egypt: When participants were asked what they expected to see and wanted to see while navigating Ancient Egypt during the game, the participants mentioned more than one element. In general, (n=26), the answer given by the participants was ‘pyramids’. This answer was followed by Pharaoh (n=11), desert (n=4), Pyramid of Cheops (n=3), mummification (n=2), Nile River (n=2) and Cleopatra (n=2), respectively. In addition to these, Egyptian inscriptions, cats, landscapes, haircuts, dressing styles, temples and Sphinxes are also mentioned on a singular basis.

“... I would like to see Cleopatra. I am also interested in the architectural structure of Ancient Egypt, I would also like to see it.” (Bm)

“... I would like to see the pyramids, the desert and the Nile River.” (At)

“... I am waiting to see the pyramids, the construction of the pyramids, the educational system of the period, the inventions of the period.” (Ce)

Motivation of Participants to Travel: Participants were asked how and why the destinations featured in books, films and games affect their personal motivations to travel. Almost all of the participants (n=29) focused on the positive effects of this situation. 1 participant (Dm) expressed the opinion that it did not have any effect. There are no participants who mentioned that books, movies and games negatively affect their motivation to travel. According to the participants, movies (n=14), books (n=10), and games (n=5) are the elements that increase travel motivation.

“... When I see the places I dream of in the movie, a whole usually forms in my head. Then those places start to look attractive to me.” (Bm)

“... I'm usually curious about the places in the movies. I especially like to watch movies with high viewing pleasure.” (Ct)

“... When I watch historical films, I admire the places shown. The fact that the visuals are intense and the information is transmitted, I think it increases my desire for admiration.” (Fm)

Abroad Experiences and Wishes: 3 of the participants (Hm, Et, Ae) have been abroad. When the participants were asked about the five countries (some of the participants answered this question with one or two examples) they most wanted to travel to, 16 participants said they wanted to visit the United States, 14 participants said they wanted to visit Italy, and 12 participants said they wanted to visit the United Kingdom. In addition, Germany (n=7), France (n=4), Spain (n=4), the Netherlands (n=3), Switzerland (n=3) and Greece (n=2) were the other countries that were other countries of interest.

“... I went to Russia and Georgia. My dad drives a truck, I went with him.” (Ae)

“... I'm usually curious about European countries. I would like to go to Italy, Switzerland and Germany.” (It)

“... I just want to go to developed countries, I don't want to see undeveloped countries. If I could, I would go to America and England.” (Ce)

Tools that Participants Research: More than one answer was received in the question directed to the participants about the research they have done about the destination they will go to before the trip. When the answers received from the participants were examined, Google (n=24) was used the most, followed by Youtube (n=15), Instagram (n=13), obtaining information by asking my acquaintances (n=3) and Google Maps (n=2) and Ekşi Sözlük (n=2). 2 of the participants (Am, Fm) said that they traveled without doing any research before the trip.

“... I usually get an idea of where I'm going to go. I don't do any research, what I encounter on a daily basis is enough for me.” (Am)

“... I look at Google and I definitely have some information. I ask acquaintances, if there are friends who go there, they will tell me. I look at Instagram and there are good photos there, and I have more or less an idea.” (Im)

“... I usually go into Google. Google redirects me to Youtube. If I like the videos I watch on Youtube and I'm very curious, I research them on Instagram.” (Bt)

Findings of the Participants' on Post-Gaming Experience

Information Competence of the Game: When the participants were asked about the adequacy of the information in the game, most of the participants (n=18) answered that the information was sufficient, 6 of them said that the information should be more detailed, 3 of them (Ct and Jt, De) said the information was more and less detailed, 2 of them (Cm and Dm) said the information was too much and boring, and 1 of them answered that the information was very detailed and handled in a nice way (Am).

“... I didn't have a problem with information, but the fact that the other comes a few minutes after learning one feels like moving on to another without digesting one piece of information.” (Bm)

“... I think it would make more sense if the information given in the game was given a little more spaced out. I think that if it happens too often, people who have nothing to do with it can get bored. Maybe it makes you curious at first, but then I think you can get bored.” (Jt)

"... It is tiring both to hear English and read Turkish. I think the information was good, but I would like it to be a Turkish dubbing." (De)

Game Streamer: When the participants were asked if they wanted to watch the game experience they experienced from a game content streamer, the majority of the participants (n=21) stated that they wanted to experience it themselves rather than watching a streamer. While 7 participants said that they wanted to watch both from the streamer and experience it on their own, 2 participants (Am, Ee) stated that they wanted to watch from the streamer.

"... I guess I'd rather play the game myself than watch it from a streamer. Streamers will include their own interpretation in the stream. The information in the game sounds more reliable than the comments of a person. Maybe he can pass on to us a piece of information that he hears wrong so we learn in a wrong way." (Hm)

"... I might want to watch the main game (AC Origins) from a streamer, but it would be much better for me to play the discovery tour, to experience it myself." (Be)

The Attractiveness of the Game: When the participants were asked about the realism of the game, the information and visuals in the game, 15 of the participants said that the content of the game was at a high level, while 14 participants said that it was at a sufficient level. 1 participant (Ft) said that the graphics looked like a child's game.

"... The game was very, very detailed, very realistic. They did it in a very realistic way, they even embroidered some symbols and motifs on the stones, even the stones were very realistic." (Jm)

"... I have watched documentaries about Egypt before, I could also see a few photos I saw there here, when I compare, I can say that the visuals are good." (Dt)

"... The visuals in the game looked exactly the same as the real thing. It was almost exactly the same." (Be)

Soundtracks of the Game: When the participants were asked their opinions about the music that was playing during the game, different answers were received from each other. 11 of the participants said that music increased their sense of curiosity, 9 of them said that it was compatible with the game, 7 of them said that they did not pay attention to music, 1 of them (Je) said that they did not like music at all, 1 (Ht) said that music should resemble movie soundtracks, and 1 (Ft) said that it did not evoke any emotion in them.

"... The music was integrated with the game and reflected the history of the game. It made the person playing the game feel like they were traveling through Egypt. I can't imagine there's no music, I'd be bored if there wasn't." (Im)

"... I heard a slight sound related to music. I didn't realize it very much. Actually, the music changes the ambiance of the game, but I didn't notice much in this game. I think the music should always play in the background." (Ct)

"... I think music has a very important place in games and places with such ambiance. In fact, the instruments used in the songs tell us about Egypt. The music makes it better for us to get into the atmosphere of the game." (Ge)

The Mechanics of the Game: In the question about the mechanics of the game, most of the participants (n=26) stated that the gameplay mechanics of the game were quite easy. 4 participants (Et, Ce, De and He) expressed some difficulty due to the game mechanics.

"... It's a normal game, it's the same in all games anyway. If you play a little, you know which key is where, I think there is nothing difficult." (Cm)

"... The game wasn't actually very difficult. I just haven't played for a while, I think if I played all the time, I wouldn't have that much difficulty." (Et)

"... It probably wouldn't have been difficult for someone who was constantly playing games, but I had a little difficulty because I wasn't used to using the keys. I don't think I would have a hard time if I had continuity." (He)

Experiences of Wandering Ancient Egypt: When the participants were asked about their experiences of wandering Ancient Egypt, 29 participants stated that their experiences were positive. In addition to their

positive experiences, 14 of the participants stated that they had a learning-based experience, 1 participant (Im) gained the chance to have a realistic experience with this game, 1 participant (Cm) was impressed by the visuals of the game, 1 participant (It) stated that this game was a great opportunity for financially underprivileged individuals and 1 participant (Ft) stated that he found the game successful enough to jeopardize the Tourist Guidance, the department he studied himself.

“... To be honest, it was very nice for me to see the historical places. After all, I've never been to Egypt before, and I've never done any research. Seeing the historical buildings there, especially the Pyramid of Cheops, impressed me a lot. Very impressive indeed. I know it's one of the 7 wonders of the world, but seeing it in the game affected me more.” (Em)

“... Information that we cannot access today has been transmitted to us in a legendary way through the game. It was very nice, I liked it very much. I'd give it a 10 out of 10 anyway. Because there is no such transfer nowadays.” (Hm)

“... The game was better than I expected, it was a good feeling to walk around Ancient Egypt. I felt like I was in Egypt for a moment at that moment. It's like I walked around there alive and I talked to those guys.” (It)

Tourism Elements: When the participants were asked about the tourism elements they remembered in the game, the participants mentioned more than one element. Mummies and pyramids ranked first (n=21), while Alexandria (n=17) was another most common answer. Apart from this, singular answers such as temples, local people, architecture, market and desert were also given.

“... The details of mummification are that there is a hierarchy among mummifiers, I honestly did not know that it was a profession and a trade. I thought mummification was a free thing. I didn't know they were putting it into trade. I saw that gap between rich and poor again. I learned about the physical characteristics of the Pyramid of Cheops. I didn't know much about Cheops, I learned it.” (Cm)

“... The market places were beautiful, the shouts of the people and the games of the children. It was interesting to stroll through the public areas of the city, walk through the wide streets. I learned a remarkable amount about the Egyptian Pyramids, and I learned more than I can count.” (He)

“... I was interested in the looting of the pyramids and even the opening of the looting entrance to some of them by blowing them up, as well as the pure place where the mummies were hidden.” (Fe)

General Opinions about Ancient Egypt: After the ancient Egypt experiences, the participants were asked about their views on Egypt, and the vast majority of the participants (n=28) stated that they had a more positive view of Egypt and increased their interest in Egypt compared to the pre-game period. When the participants were asked what changed their minds about Egypt, the participants stated that it was due to the historical information given in the game (n=15), the visual attractions (n=3), the mysteriousness of the game (n=3), the historical infrastructure of Egypt (n=2), the pyramids (n=1), the desire to see a new country (n=1), the lifestyle in Ancient Egypt (n=1), the similarity of the game they played to a successful Egyptian tourism advertisement (n=1) and the greatness of the Ancient Egyptian Civilization (n=1). One of the participants (Cm) stated that his interest in Egypt was negative after the experience, while one participant (Ct) stated that he had no effect.

“... I was neutral against Egypt before we started the game, and as I played the game, my mind started to change. It was actually a must-see place. The biggest reason why I changed my interest and opinion towards Egypt was that it was actually a historical place. I think there will be much, much more to learn when we go.” (Em)

“... Everything was very interesting, even this game attracts people's attention more and leads us to research. You want this journey to continue further.” (Dt)

“... I have a passion for traveling, I like to see new places very much. I want to go to Egypt with more enthusiasm now because I have gone into more detail of the things I have thought about here and I can observe them in more detail.” (Ht)

Differences of Opinion about Egypt: After the experience, when the participants were asked about the information they knew incorrectly or did not know about Egypt, some of the participants (n=14) said that they had no information about the mummies at all or they had incorrect information about the subject. The subjects that the participants learned the most about were the mummies (n=12) and the pyramids (n=12). In addition, Alexandria (n=3), the statue of Herodotus (n=1), Greek-Egyptian culture (n=1), funerals (n=1), the tools and

materials used in the construction of the pyramids (n=1), and the fact that Ancient Egypt was an advanced civilization (n=1) were also reported.

“... I never knew the details of the embalming, that treasure hunters attacked the pyramids, and I was very surprised when I learned.” (Cm)

“... I already played the game without knowing anything about Egypt. I thought there were inscriptions on the pyramids, like on the tablets, but there were none.” (Em)

“... I realized that I didn't actually know anything about Egypt. I can say that I got all my knowledge about Egypt from here.” (Ht)

Desire to Travel to Egypt: The participants who experienced the ancient Egypt tour were asked to answer over 10 points about how much their desire to travel to Egypt increased after their experience. The highest score from the participants was 10 (At), while the lowest score was 0 (Cm). The total score given by the participants is 71,33.

“... This experience was enough for me. I was as if I had seen Egypt. My desire to see Egypt has not increased.” (Cm)

“... My desire to go to Egypt actually increased a lot thanks to this game. I give 7 points, but this score is due to my own financial impossibilities. If I had the financial means, I would give 10.” (Ft)

“... Egypt has become one of the top 10 countries I want to travel to. I wonder how they thought of making a game like this. It's very interesting.” (He)

The Desire for a Different Experience: The participants stated that they wanted to experience a similar experience for other countries as they had for Ancient Egypt. When the participants were asked which destinations they would like to have a similar experience for, the participants gave answers such as Ancient Greece (n=7), Turkey (n=2), India (n=2), America (n=2), and South Korea (n=2). In addition to these answers, Ancient Rome (n=1), Sumerians (n=1), all European countries (n=1) and all world countries (n=1) Inca Civilization (n=1), Georgia (n=1), Mesopotamian civilizations (n=1) and Lydian civilization (n=1), Japan (n=1), France (n=1), Africa (n=1), England (n=1), Germany (n=1), Roman Empire (n=1), The Hanging Gardens of Babylon (n=1) are also among the answers given.

“... I am very curious about the gardens of Babylon, I would be very happy if a game was made about it and I had the opportunity to experience it.” (Jm)

“... I think this game should definitely be applied to other countries. It could be America, for example, and it would be much better if it describes the American Indians. I'm very curious.” (At)

“... I would like to see my own country, Turkey. I think Turkey definitely needs to be seen.” (Ie)

Suggestions for the Game that will take Place in Turkey: When asked about which destination a similar game should take place in Turkey, the participants stated; Istanbul (n=8), Şanlıurfa (n=5), Mardin (n=3), Cappadocia (n=2), Izmir Ephesus Ancient City (n=2), Mesopotamia region (n=2). In addition, the participants stated the destinations: Çanakkale (n=1), Kars (n=1), Gaziantep (n=1), Muğla (n=1), Hatay (n=1) Bayburt (n=1), Konya (n=1), each region in Turkey (n=1).

“... I think a game should be made in the eastern region, especially in Mardin. The society there is completely different. I would like people to experience it thanks to this game because the information, data, internet resources of those places are a little weaker than in other regions.” (Gm)

“... I would like to have a game that tells about my hometown, Kars. There are many unknown beautiful places in Kars, and it is also one of the most important places in terms of the First World War and the Caucasian front.” (It)

“... A game where I could visit Urfa, Göbeklitepe would be nice. I liked it very much that I saw it in the Atiye series.” (Ee)

Results and Recommendations

Participants were asked questions to measure how their desire to travel to Egypt changed, and their answers were examined. Compared to the pre-game, participants developed a positive outlook toward Egypt and the game increased their desire to travel to Egypt. In the research of Oğuz et al. (2021), it was determined that

online games increased the intention of users to buy a vacation in a positive and meaningful way. It has been seen that the important reason for this positive increase is the real or real-inspired locations in the games. When the results of the two studies are compared, the outputs show similarities. But when the answers of the participants, who played the Ancient Egypt expedition, were examined, unlike the participants in the other research; It has been seen that the information offered by the game, the visual attractions/realities, the mysterious structure of the game, the historical richness of Egypt, the pyramids, the fact that Ancient Egypt is a developed civilization, the desire to see a new country and the fact that the game is seen as a successful tourism advertisement are the reasons that increase the desire to travel. It is believed that the difference between the two research data is due to the fact that the games played are not the same. In addition, it is thought that the fact that the Ancient Egypt discovery tour, scripted by history and Egyptologists for educational and cultural purposes, contains many elements related to tourism and has the quality of a virtual museum, has changed the quality and quantity of the answers received.

Looking at the comments of the participants about the Ancient Egyptian experiences, it was seen that the game successfully simulates Ancient Egypt, interest in Egypt in its users, provides a learning-based experience, and can be used as an application that can replace travel activities in conditions where material or physical facilities are not enough. Casey (2021), in his research where he says that no academic research can provide the experience of the simulated world of games, emphasizes that it is also possible to learn by understanding Ancient Egypt thanks to the information given in AC Origins. Zeren and Paylar (2016) reveal that brands and products that are previously known have 2 to 7 times more purchase intention than other products. In addition, it is said that the companies that want to make product placement through games will increase the likelihood of users remembering the brand if the products they want to promote or market are compatible with the game, and a successful promotion activity can be done in terms of the brand. Based on the studies in the literature, it seems possible to carry out a successful promotion and promotion activity by using games as a tool that includes tourism products, destinations, museums, and cultural items that are tourism products, such as AC Origins, tourism items and transferring these items to users through information.

It was seen that 96,7% of the participants wanted to experience the same game experience they had for Ancient Egypt for other countries. Participants gave a total of 18 different answers to the destinations they wanted to visit through the games; Ancient Greece, India, Turkey, all countries of the world, all European countries. In the light of these data, it can be said that the promotion and marketing of tourism destinations through video games can have effective results on Generation Z. Dubois and Gibbs (2018) say that video games, like movies and books, are a supporting force for tourism and that video games should be invested in before making heavy investments in virtual reality. Shaheer (2022) argues that video games reveal tourist attractions and have the potential power to turn destinations into attractions over time. Rainoldi et al. (2022) suggest that video games offer a major marketing opportunity for tourism. When the studies in the literature and the findings of the research is compared, it is seen that the results show consistency. The important contribution of the research findings to the literature is revealed by the fact that the participants give different answers to the destinations they want to see in the games. The fact that the answers given differ from each other strengthens the idea that the game can be adapted for many destinations. However, this should not be interpreted as every destination can be successfully marketed through games. The strongest inference that can be made from here is that any destination that wants to be promoted through games will reach many users and that there is at least one country that almost every user wants to learn/visit through games.

Participants were asked in which destinations they expected a game to take place on Turkey's borders. When the answers of the participants were examined, it was seen that the destinations they said were generally dense in population and that they chose regions with a rich historical past. On the other hand, 8 of the participants stated that the destinations they chose were the cities where they were born and grew up. It has been observed that the participants who want their hometowns to be the subject of the game give these answers because they think that these destinations are not promoted enough or that the promotions are not good.

In order to give an idea and set an example for a game developed to be used in destination marketing in future processes, the attitudes of the participants regarding the game content, the music of the game, the frequency of the information given in the game and the difficulty of the gameplay was tried to be measured by asking about the visual appeal of the game. It has been seen that the game music increases the sense of curiosity on the participants and helps them integrate with the atmosphere. It has been observed that the realism and quality of the game visuals is an important factor for the game appreciation of the players. Although it has been observed that the frequency of in-game information varies from participant to participant, it has been observed that too frequent and excessive information makes the game boring. Due to the fact that the game has simple

gameplay mechanics, although there is usually no problem experienced by the participants while playing the game, it has been seen that some individuals who do not play at all or play little cannot keep up with the guide's narratives. Therefore, with these data, the factors that increase the desire to travel to Egypt due to the game, which are also the data belonging to this research, was compared, and it was found that the visual attractiveness/reality of the game with the information provided by the game prioritizes the liking. In summary, in a game where destination marketing will be done; The information provided, the visual appeal/authenticity of the game and the fact that it has simple gameplay mechanics to appeal to everyone should be seen as important factors in the successful presentation of the game to the end user.

As a result, video games appear to be applications created on the basis of AI that can be used for the purpose of promoting destinations and culture. Although there is no game created for this purpose today, it is thought that the games will be used for this purpose in the future. Some situations have been identified that should be considered in order for the games to be created for this purpose to be successful in promotion and promotional activities. There does not seem to be an obstacle for the games organized by competent people who take these suggestions into consideration, keep up with the age, follow the developments and succeed in promotional activities. In addition, it is observed that games with high-quality content have a much longer usage and shelf life compared to advertising films. There are games that were released 10 years ago, reached millions of sales in the past and are still played by hundreds of thousands of users today.

It is possible to summarize the results obtained within the scope of the research as follows:

- AI-based video games affect the perception of destinations on the younger generations.
- AI-based video games increase the desire of participants to travel to the mentioned destination.
- AI-based video games arouse the participants' desire to have similar experiences for Turkey and different countries.
- AI-based video games attract the attention of the participants and increase their tendency to do research.
- AI-based video games affecting the concept of image, it contributes to the transformation of a negative image into a positive image.
- It is possible to say that a game that can bring Turkey's historical, geographical and cultural features to the forefront can contribute to Turkish tourism in the global tourism market.

The recommendations that can be brought about the research research constitute three bases. According to the results of the research recommendations were made to researchers, tourism enterprises and public institutions.

- Researchers can conduct a research to reveal data on which content in video games increases travel motivation.
- Researchers can measure the perception differences between X-Y-Z generations of destinations promoted through video games.
- Researchers can compare the effects of traditional commercials and video games on travel motivation.
- Airline companies can be encouraged to include video games promoting the country, especially in terms of evaluating long waiting times on international flights.
- Video games can be included in the country promotion activities of the Ministry of Culture and Tourism in the future.
- It is recommended that national tourism organizations act together to create video games suitable for children and young people of all ages in order to create social tourism awareness and provide cultural learning at a young age.

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