Exploring Students' Perceptions of Virtual Reality in Tourism Education Through the Technology Acceptance Model

Teknoloji Kabul Modeli Aracılığıyla Turizm Eğitiminde Öğrencilerin Sanal Gerçeklik Algılarının İncelenmesi

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Abstract

This study investigated the usability of virtual reality applications in tourism education in the context of a virtual reality headset (VR headset). Qualitative research methods were used in this study, with the Technology Acceptance Model (TAM) providing the theoretical infrastructure. Data collected from 25 students using a semi-structured questionnaire were analysed using content analysis. The results of the study show that the use of the VR headset as a supporting tool in tourism courses has a positive impact on learning styles, provides experiential and visual learning opportunities, and offers advantages in terms of flexibility and accessibility. In addition, students are very satisfied with the use of the VR headset in their courses and find it easy to use. In conclusion, VR headsets have the potential to contribute to the academic success of tourism students.

Keywords: Technology, Virtual reality, Tourism, Tourism education, Student

Özet

Bu çalışma sanal gerçeklik uygulamalarının turizm eğitiminde kullanılabilirliğini bir sanal gerçeklik gözlüğü (VR gözlük) ile deneyimsel olarak test etmektedir. Çalışmada nitel araştırma yöntemleri kullanılmıştır ve Teknoloji Kabul Modeli (TAM) teorik altyapıyı sağlamıştır. Yarı yapılandırılmış görüşme formu kullanılarak 25 öğrenciden toplanan veriler içerik analizi ile analiz edilmiştir. Çalışmanın bulguları VR gözlüğün turizm derslerinde destekleyici bir araç olarak kullanılmasının öğrenme stilleri üzerinde olumlu bir etkisi olabileceğini, deneyimsel ve görsel öğrenme fırsatları sağlama potansiyelinin olduğunu, esneklik ve erişilebilirlik açısından avantajlar sunduğunu göstermektedir. Ayrıca öğrenciler derslerde VR gözlüğün kullanımını kolay bulmaktadır. Son olarak VR başlıklar turizm öğrencilerinin akademik başarılarına katkıda bulunma potansiyeline sahiptir.

Anahtar Kelimeler: Teknoloji, Sanal gerçeklik, Turizm, Turizm eğitimi, Öğrenci

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1.   INTRODUCTION

The use of technology makes lectures more enjoyable, easier to understand, and faster and easier to access information (Chang et al., 2015; Shin et al., 2019). Technology is used as a strategic tool to encourage student attendance, improve instruction, reduce costs, and ensure efficient learning (Ratliff et al., 2021). Virtual reality applications in particular have the potential to transform and enhance education (Blascovich and Bailenson, 2011).

Innovations such as virtual reality have gained importance in recent years with the development of technology (Ye et al., 2020). Virtual reality applications are rapidly developing with artificial intelligence and changing daily life. Virtual reality is defined as an environment in which users experience an event or phenomenon that exists in reality or in the imagination in three dimensions in a simulated world with virtual reality clothing such as headset, wired clothing, and gloves (Sherman and Craig, 2018). Virtual reality technologies are designed as a computerized three-dimensional experience in which the user's senses are stimulated and guided in real time (Guttentag, 2010; Moro et al., 2018). One of the most commonly used devices as virtual reality technologies are virtual reality headset (VR headset). These devices are worn like normal glasses and reflect visual effects directly to the human eye. In this way, wherever the user looks, they can see the visuals and their position in space without interruption. VR headset give the user a sense of presence in the virtual world and create the opportunity to be present and interact with other users (Slater and Sanchez-Vives, 2016).

Although studies on the use of virtual reality technologies in education began about 35 years ago (Wickens, 1992; Loftin et al., 1993; Moore, 1995), research on the integration of technological innovations such as virtual reality in education has increased in recent years (Hincapie et al., 2018; Rojas-Sánchez et al., 2022). The use of these innovations has been adopted by both students and teachers, highlighting their positive effects (Lampropoulos et al., 2022; Radianti et al., 2020). Especially in the last 15 years, virtual reality applications have crossed borders and can be used in almost all types of education and training (Jensen and Konradsen, 2018). On the other hand technology-enhanced learning styles are becoming more popular as they have the potential to be a very important component of education in the 21st century (Alexander et al., 2019). In recent years, technology applications have been increasingly integrated into education and training plans to meet the diverse learning needs of students (DiLullo et al., 2011). In addition to enriching the traditional education system, technological innovations can improve the quality of education by providing convenience to educators and meeting the demands of the changing education system (López-Belmonte et al., 2022). Educational institutions around the world are working on new educational systems to prepare students for technological developments in the field of education and the sector (Adukaite et al., 2016). One of these educational systems is the integration of virtual reality technologies into traditional education. Education and training are being reshaped with innovative teaching methods and technological developments for both students and teachers (Freitas and Veletsianos, 2010). In recent years, smartphones and smartboards have replaced books and whiteboards, and students have moved from passive positions of listening and watching to active positions of experiencing and interacting (Freina and Ott, 2015).

Technological innovations such as virtual reality and augmented reality have been used in recent years in different areas of the tourism sector such as planning, management, marketing, entertainment and education (Guttentag, 2010). Therefore, educational institutions should integrate these technological innovations into their courses in order to train human resources that can respond to the technological needs of the sector. On the other hand, the tourism sector is extremely important for many countries. Given that tourism is a labor-intensive sector, people are key to the success of the sector, and these people need to be well educated to ensure and sustain success (Baum 2007; Lee-Ross and Pryce, 2010). With modern tourism education that embraces technology, the skilled workforce that the sector needs can be trained. Especially considering Generation Z's close relationship with technology, virtual reality technologies can be an important factor in improving

the quality of tourism education. For these reasons, it is valuable to study the acceptance processes of the use of virtual reality technologies in tourism courses by students. In order to examine this process, the Technology Acceptance Model (TAM) developed by Davis (1989), one of the most widely used models in the literature, was used in this study.

The interview questions are as follows:

Should VR headset be used as a supportive tool in courses? Why?

Do you think you will be satisfied with the use of VR headset? How?

Does VR headset affect your academic achievement? How?

Does VR headset affect your motivation for the courses? How?

Is it difficult to use virtual reality headset?

2.   LITERATURE

In the litareture some studies have demonstrated the positive effects of virtual reality technologies on learning outcomes. For instance, Lee and Wong (2014), Lau and Lee (2015), and Lim et al. (2018) have proposed that knowledge obtained via VR headsets is more lasting than knowledge obtained through traditional methods. Huang et al. (2024) stated that VR provides students with multidimensional experiences by activating kinesthetic, visual, auditory, and tactile channels. However, these studies are based on small samples, which limits the generalizability of the findings. Additionally, while some studies emphasize the motivational impact of VR (Lampropoulos et al., 2022; Makransky & Petersen, 2021), others indicate that excessive sensory stimulation may increase cognitive load and hinder learning (Slater, 2016). Whether students' heightened sense of "being there" (Makransky et al., 2019) is directly related to learning success is debatable. From an institutional perspective, although VR is argued to bring innovation to lesson planning (Estapa & Nadolny, 2015), its high cost, lack of technical infrastructure, and inadequate teaching staff are seen as significant limitations. Therefore, although Kaleci et al. (2017) emphasize students' satisfaction with VR headsets overall, the extent to which this satisfaction translates into long-term learning outcomes and sustainability is debatable.

In the literature on tourism education, virtual reality (VR) stands out for offering accessible, realistic, and motivating learning opportunities (Patiar et al., 2017; Huang et al., 2010; Hsu, 2012). VR has been reported to enhance problem-solving and teamwork as a supportive tool (Penfold, 2009), provide flexibility in terms of time and cost (Huang et al., 2013), and increase student motivation (Tseng, 2015). VR has also been suggested to support skill development by reducing cognitive load (Bower et al., 2014). Schott (2021) and Lee et al. (2016) have emphasized VR's advantages in terms of flexibility, personalized learning, and visualization. Chiao et al. (2018) and Alizadeh and Hawkinson (2021) have found that VR increases students' cultural and environmental awareness. However, it is unclear to what extent these experiences are retained in professional practice. Okul (2022), Papachristos et al. (2018), and Kumlu (2021) found that students preferred VR to traditional tools for attention, motivation, and long-term learning. However, these findings may be limited to a short-term novelty effect. On the other hand, applied studies demonstrate the usability of VR in tourism education. For example, Chen and Mo (2014) developed three-dimensional destination simulations for tourist guide training, and Lee et al. (2017) showed students 3D videos using Google Cardboard. They reported that the students were satisfied with the experience. Tormey (2019) found that students at Gonzaga University enjoyed VR-supported courses, but emphasized that the relationship between engagement and long-term learning is not necessarily linear. In the field of food and beverage education, Patiar et al. (2017) organized virtual field trips using VR headsets and found that student satisfaction levels were high. However, these studies generally rely on subjective assessments, such as satisfaction, and long-term, empirical evidence regarding learning outcomes is limited.

More recent studies reveal a wide range of findings regarding the applicability of virtual reality (VR) in education. Vaishnavi and Ajit (2024) found that 360° VR videos increased student engagement, though the long-term effects remain uncertain. Ismail et al. (2024) found that, while gamification with VR offered educational benefits in front-office simulations, costs and difficulties in scenario design posed significant challenges. Lui and Goel (2022) found no significant difference in learning outcomes between VR and real-world training, demonstrating that assuming VR is always superior is risky. Figueroa and Jung (2025) revealed that the implementability of student-centered, low-budget VR/AR content depends on content quality, user interface, and pedagogical alignment. In their systematic review, Calisto et al. (2024) emphasized that VR is mostly limited to simulation and virtual tour applications, highlighting the lack of regular and scaled case studies. Elsayed (2023) found that, while students find VR attractive and innovative, high costs and a lack of teacher support create significant barriers to implementation.

In general, the literature suggests that VR has significant potential in tourism education. However, to implement this effectively and sustainably, long-term and cross-cultural research, standardized criteria, pedagogical adaptation, and infrastructure and instructor support must be evaluated together.

3. METHODOLOGY

Qualitative research methods are used in this study. Qualitative research is research that seeks to understand and uncover social reality and the reasons for the behaviour of individuals or groups, and uses data collection techniques such as observation, interview and document analysis (Creswell and Creswell, 2017).

The study is situated within an interpretive philosophy (Saunders et al., 2019), based on the assumption that knowledge generation is possible through the interpretation of participants' experiences. The research approach, while deductive in nature based on the Technology Acceptance Model, also encompasses an inductive dimension due to the qualitative findings collected through semi-structured interviews. Strategically, the study qualifies as a case study because it focuses on examining tourism students' experiences with VR headsets in a specific learning environment. Furthermore, the research is cross-sectional in nature because the data were collected during a single implementation process. This layered methodological structure allows for a stronger interpretation of the findings from both theoretical and practical perspectives. Therefore, this preferred methodological approach supports the reliability and validity of the study.

3.1. Data Collection

In this study, the interview technique was preferred due to the comprehensive nature of the topic and its suitability for systematic data collection. The data collection tool used was the semi-structured interview technique, which is often used in qualitative research and allows the researcher to be flexible and obtain in-depth information as the interview progresses (Tisdell and Merriam, 2025). In order to ensure the validity and reliability of the study, as suggested by Boyce and Neale (2006), the researchers adopted a neutral attitude during the data collection and avoided any behaviour that might cause confusion among the participants. On the other hand, as emphasised by Yıldırım and Şimşek (2018), after the completion of the data collection process, the findings were reconciled with the participants, the results were consulted with researchers working in a similar field and expert opinions were sought.

According to the purpose of the study, the purposive sampling technique, which is widely used in qualitative research (Marshall and Rossman, 2014), was used to determine the participants of this study. Purposive sampling is the quickest and easiest way for the researcher to reach the right samples that fit the purpose and subject of the research (Neuman, 2007). In this context, the sample of the study consists of the first, second, third and fourth year students of the Tourism Management Department of Dokuz Eylül University. The data of the study were collected from these students between 05.05.2023-10.05.2023 through face-to-face semi-structured interviews.

In studies conducted using qualitative research methods, data collection can be terminated at the point where data reaches a certain level and responses begin to repeat (Silverman and Patterson, 2021). In this context, although the saturation point was considered to be reached at the 20th participant, the data collection process was terminated when 5 more participants were interviewed, reaching 25 participants. The duration of the interviews varied between 25-40 minutes, depending on the participants' knowledge and interest in the topic. During the data collection process, the students were asked to visit places with 360-degree views such as mosques, cities, ancient cities, and monuments in the physical structures courses with VR headset and then interpret the experience. Before experiencing the virtual reality headset, questions were asked about ease of use and expectations. After the experience, data was collected by asking broader questions.

No ethics committee approval was obtained for this study. The research aims to collect perception and evaluation data from university students who experienced the use of virtual reality (VR) headsets, based on voluntary participation. All data were collected anonymously and did not include any personal or identifiable information. Since the study does not involve any clinical intervention, experimental medical procedures, or sensitive personal data, it is considered to fall within the scope of research that does not require ethics committee approval, in line with internationally accepted ethical guidelines for social science and educational research (World Medical Association, 2013; Race and Vidal-Hall, 2019).

3.2. Data Analysis

The audio recordings obtained were transferred to the computer environment and transcribed separately by the two researchers, before being combined into a single file and made suitable for analysis. In this way, the two researchers created an initial template by first recognising the data and then pre-coding and clustering the coding process. Face-to-face data were audio-recorded, transcribed separately, and read three times by both researchers. Participants were labelled P1, P2, P3...P25 according to the order of the interviews. As content analysis is one of the most appropriate methods for analysing qualitative data (Kitzinger and Farquhar, 1999), content analysis was used to analyse the data collected at the end of the interviews. During the analysis, the data were coded and grouped according to their similarities according to Strauss and Corbin (1990)'s coding and categorisation model, and the results were interpreted in a way that readers could understand. According to Creswell and Creswell (2017), one of the ways to ensure validity and reliability in qualitative research is the consistency of themes and codes in the data set. In this context, themes and codes were developed separately by two participants at different times, and consensus was reached on common themes and codes. These are all clearly stated in the study.

4. FINDINGS

The perceived usefulness, attitude towards use, perceived ease of use, behavioural intention to use and external variables dimensions of TAM (Davis 1989; Yang and Yoo, 2004; Cheng et al., 2006) are the main themes of the study. The main themes of the courses, the main themes of the TAM and the sub-themes are presented in the Table 1.

Table 1. Main and sub-themes

Main themes	Sub-themes	f
Perceived Usefulness	Impact on the Course	55
	Learning Styles	42
	Experience	24
	Flexibility	17
	Accessibility	9
Attitude Toward Using	Feelings	47
	Satisfaction	25

Perceived Ease of Use	Convenience	24
	Challenge	1
External Variables	Problems and Suggestions	7
Courses	Applied Courses	32
	Theoretical Courses	14

4.1. Perceived Benefit

The Perceived Benefit main theme, one of the dimensions of the TAM, chosed as a main theme as a result of analysis. Under this main theme, a total of 5 sub-theme were formed as "Impact on the Course, Learning Styles, Experience, Flexibility, Accessibility".

Participants were asked what the effects of using VR headset in some courses would be. The participants responded that the use of VR headset would increase retention of the subject matter, help students focus on the course, provide motivation, have a positive effect on academic performance, increase participation in the course, and increase efficiency.

One participant had this to say about the permanence of the courses learned;

"It's more permanent than a photo, sound or video because you feel like you experienced it in real life." P14

Participants felt that VR headset would increase focus on some courses and expressed this in a striking way.

"I was able to focus on the places because it's 360 degrees, it's three-dimensional, and the headset doesn't show you anything about the real world. That maximizes the level of focus. P12."

A participant who emphasized the compatibility of the VR headset with the tourism study and mentioned that it would increase motivation to learn expressed this idea as follows;

"I think it will definitely increase my motivation to learn because our profession is tourism and this is a job based on seeing and traveling. P12"

The participant who thought that VR headset would increase academic performance expressed this situation as follows;

"Since it motivates the courses more, even the courses that are boring can more fun. In this way would be more interested in the course, the subjects will stay longer in our minds and this will affect our academic success positively. P7"

On the other hand, because the VR headset are an attractive element, some participants said they could have a positive effect on class participation.

"I think it can even increase class participation because we like new technologies and new products because we are curious about them. With this, our curiosity can increase and we can devote more time to the course and school." P8

Another participant's idea of efficiency is as follows;

"I am sure it will be efficient because I have a good visual memory. For a person with a good visual memory, it will be an educational system both in the exam and in the course." P18

Another participant made the following suggestion;

"I also think it will be more efficient if technologies like VR headset are combined with face-to-face teaching." P7

A participant's opinion about the importance of VR headset in tourism and tourism education is as follows

"Tourism students should travel and see. Information is very important to him. The more he sees, the more information he gets. Therefore, VR headset are very important for tourism students." P22

A participant who thinks that experience is very important in tourism education and that VR headset can provide this experience expresses this idea as follows;

"Some courses don't stay in my mind because I don't experience them, but if I experience them, they will be more permanent. For example, in history class, in revolution class, no matter how much the teacher tells me about the places I may forget them after a while, but if I see and experience the places, I will never forget them. P13"

One of the participants, who believes that VR headset are an innovative tool and suitable for the new generation, said the following

"I think we can come to class in a happier way. Innovation is important because we are all young." P19

One of the participants who thinks that only theoretical courses are not enough for learning mentions that VR headset will also help learning by traveling;

"VR headset have a high level of experience. By seeing, traveling, getting preliminary information about where you are sitting. So you sit in the classroom, in a simple course, you can go to the other side of the world and get information. This is definitely a big advantage of." P12

The statement of the participants who think that virtual reality headset provide interaction in the classroom is as follows

"We can focus better on the course because there is interaction, there is mutual interaction here." P22

The participants who thought that the use of virtual reality headset in some courses would provide the advantage of travel flexibility expressed this issue as follows

"Anyway, tourism is about exploring a place, it's about people traveling and you do it for free with VR headset. I think it is a great advantage." P25

The participants who mentioned that the use of VR headset in some courses will have many advantages for them also think that VR headset will be extremely useful for students with physical disabilities. The statements of a participant on this subject is as follows;

"Disabled friends can experience this realism in the same way. It can be useful for physically disabled friends to participate in classes". P2

Participants discussed the potential of VR headsets in the classroom and how they could significantly contribute to the learning process. They emphasized that VR headsets increase information retention, support focus and motivation, positively impact academic performance, and encourage classroom participation. They also noted that VR provides advantages for tourism education by supporting visual, experiential, innovative, and mobile learning styles; making information more accessible; and providing flexibility in travel. These findings are consistent with Makransky and Petersen's (2021) work, which highlights the motivational effects of VR. The findings also suggest that VR could be an accessible educational tool for students with physical disabilities, a topic rarely addressed in the literature. However, the extent to which these advantages can be applied in practice is debatable, considering infrastructure and cost.

4.2. Attitude Towards Use

"Attitude Toward Use, one of the dimensions of the TAM, is another theme of the study. Under this main theme, there are the sub-themes of " Feelings" and "Satisfaction".

The participants who felt that the use of virtual reality headset in some courses would have a positive effect on the courses were as follows;

"Our motivation increases, the courses are no longer boring, they can be more fun. When we come to school, we come with excitement because there is this training today and we are going to visit this place." P4

Some participants also thought that using VR headset in class would make the class more attractive. Some opinions on this subject are as follows;

"Since it is vivid and fluid, we do not get bored when we constantly go to a different atmosphere. Classes become more interesting in such different environments. I think it will also increase participation in class." P9

During the data collection, the participants who visited the historical and touristic places they had previously seen in the courses with the VR headset expressed their feelings on this topic as follows;

"It was like I was really there. You know how in the first country you visit you stare in a daze, I really got that feeling. It felt very real to me, emotionally, like I said, I felt like a tourist." P11

Participants who visited historical and tourist sites with VR headset were asked if their expectations were met. While there were no participants who did not meet their expectations, 17 participants' expectations were met and 8 participants' expectations were exceeded. The statements were as follows;

"I was very satisfied. It was much more than I expected. The atmosphere was very lively, I felt like I was there." P9

Participants stated that using VR headsets made lessons more enjoyable and engaging, increased their motivation, and positively impacted the learning process. While all participants were satisfied with their VR headset experience, some said their expectations were exceeded. They emphasized that the strong sense of reality provided by the headsets increased their interest in the lessons and that the opportunity to learn in different environments excited them. These findings are consistent with previous studies on the effects of VR on learning motivation (Makransky & Petersen, 2021; Tseng, 2015). However, Slater (2016) notes that the intense sense of "presence" offered by VR may not always directly relate to learning success and may increase cognitive load in some cases. Therefore, while the positive findings in this study support the existing literature, the extent to which students' satisfaction and excitement translate into long-term learning outcomes is unclear.

4.3. Perceived Ease of Use

When asked about the ease of use before using the VR headset, 21 participants said it would be easy and 4 participants said it would be difficult. In the same question asked after use, the opinion of 3 participants changed positively. Accordingly, almost all of the participants (24 participants) stated that the VR headset were quite easy to use, while only 1 participant stated that it was difficult. Considering that most of the 25 participants (18 participants) were using VR headset for the first time, it can be said that they are indeed easy to use.

Here are some of the statements by participants who found it easy to use the VR headset

"I had no problems, it was very easy to use." P2

"Although it was my first experience, it was still easier than I thought." P14

Before using the VR headset, most participants thought it would be easy to use, while a few indicated it might be difficult. After using it, however, almost all participants found the headset quite easy to use. Those who had never tried it before said it was more practical than they had expected. Some participants also mentioned that getting used to the buttons on the controller could be challenging at first. These results support studies emphasizing that "perceived ease of use" is one of the most important determinants of positive attitudes and intentions toward technology within the technology acceptance model (Davis, 1989; Venkatesh & Bala, 2008). Similarly, Makransky and Petersen (2021) suggested that the short adoption time of VR technologies could increase motivation. Conversely, Slater et al. (2016) note that cognitive load may increase when becoming accustomed to control mechanisms, particularly for new users. Therefore, although the findings clearly demonstrate the ease of use of the VR headset, differences in experience among user groups should be considered.

4.4. External Variables

Participants mentioned problems after the experience, mostly involving technical issues such as the internet. Suggestions were made by the participants for these problems.

"I think the Internet is not very good. It was a bit stiff because of the Internet, I think some things were blurred." P23

"A little training can be given for 10 minutes. Other than that, I don't think you need much else." P18

"VR headset can be a disadvantage for those who wear large glasses, so there must be a solution for them." P15

Participants reported experiencing drawbacks while using the VR headset, including technical issues and eye strain. During the experience, the most prominent suggestions included improving the quality of the internet connection, providing short orientation training sessions, and developing more practical solutions for the equipment. These findings align with limitations previously expressed in the literature regarding VR use. For instance, Radianti et al. (2020) assert that, although VR offers significant learning advantages, technical infrastructure, cost, and ergonomic issues commonly pose barriers. Similarly, Makransky and Petersen (2021) emphasize VR's motivational effects but also draw attention to possible side effects, such as eye strain and distraction, during prolonged use. Therefore, the recommendations obtained in this study indicate that, for VR to be effectively used in education, the focus must be on not only content design, but also infrastructure, user health, and technical support.

4.5. Courses

Participants' opinions on the use of VR headsets in courses highlighted two main themes: practical and theoretical courses. Students indicated that VR could be used in application-oriented courses, such as Food and Beverage Management, Hospitality Management, Travel Management, and Automation, to develop practical skills. Students also stated that VR could be useful in theoretical courses, such as Turkish Tourism History, Cultural Heritage, History of Civilization, and Intercultural Communication, to make abstract concepts more concrete and visual. These findings demonstrate the versatility of VR in education and align with similar approaches in the literature. For instance, Yung and Khoo-Lattimore (2019) argued that VR has advantages for tourism education in terms of experiential learning and conceptual understanding. However, Radianti et al. (2020) acknowledged that VR can make abstract topics more understandable but pointed out that overreliance on technology in theoretical courses may overshadow students' critical thinking skills. Therefore, while this finding reveals that VR can contribute to both practical and theoretical courses, achieving the desired learning outcomes may be debatable if pedagogical balance and content alignment are not ensured.

4.6. Behavioral Intention to Use

Before trying the VR headset, participants were asked about their expectations and opinions regarding ease of use. A comparison was made between their pre- and post-experience views. Before trying it, the vast majority of participants believed that the headset would be easy to use and could be a useful learning tool, and these views were reinforced after the experience. Some initially undecided or negative participants also stated that they found the VR headset easier and more impressive than expected. These results demonstrate that virtual reality experiences can contribute to students developing positive attitudes toward technology by breaking down their preconceptions. Similarly, Makransky and Petersen (2021) found that VR increased perceived ease of use and motivation following initial use. While this study's findings show that VR positively contributes to the learning process by increasing perceived ease of use, the extent to which this technology offers lasting benefits to different user groups remains debatable.

5.   CONCLUSION

In tourism, which is a labor-intensive sector, success at micro and macro levels is only possible with well-trained and qualified personnel. Therefore, quality and modern education should be provided to students of tourism departments, especially in universities. In this sense, the use of advanced technological tools such as VR headset in tourism education will provide the sector with qualified personnel.

The use of VR headset as a teaching tool in tourism courses is expected to have some positive effects on students. One of these effects is that the use of VR headset as a tool in the classroom can make the subject learned more permanent in the minds of the students than the subjects learned through traditional methods. In addition, this tool has the potential to increase motivation in the classroom and focus on the course material. It is also perceived as an encouraging innovation for students in terms of class participation. VR headset increase the efficiency of tourism education and promise to improve students' overall academic performance. On the other hand, in terms of learning styles of courses and subjects, VR headset can be beneficial for students in terms of supporting learning styles such as visual-based learning, experiential learning, innovative learning, and travel learning. It can make a difference to classes and subjects, especially by being realistic, fluid, and allowing interaction. In addition, the flexibility of travel and mobility for students and teachers is another advantage of using VR headset as a supportive tool in tourism education. Furthermore, it has the potential to be an extremely useful tool in the classroom, especially for students with physical disabilities, as it provides accessibility.

It is seen that students who experienced VR headset in relation to the content of tourism courses developed positive attitudes towards the use of VR headset after this experience. In fact, the use of VR headset is fun, interesting, enthusiastic and exciting for students. In the study, 17 out of 25 students reported that the virtual reality experience met their expectations and 8 students reported that it exceeded their expectations. This situation indicates that they were/will be satisfied with the use of VR headset as a supportive tool in appropriate courses on an ongoing basis.

It can be seen that tourism students have no difficulty in using VR headset. In this sense, especially considering the fact that Generation Z lives intertwined with technology, VR headset can be easily used by tourism students. In fact, almost all of the students who thought they would have difficulties before using them changed their opinion positively after using them.

The use of VR headset as a supporting tool in tourism education is considered appropriate for courses where physical structures should be seen and for practical courses. In Cultural Heritage, Civilization History, History and Archaeology courses, the use of VR headset within the framework of subjects that require seeing physical structures such as ancient cities, buildings, sculptures, museums and city centers will not only save time and money for students and faculty members, but also increase the efficiency of these courses. In addition, its use in practical courses such as hospitality management, travel, automation, and front office courses has the potential to contribute to sustainability as well as saving time and money. In addition, the fact that students learn by trial and error, that it allows them to make mistakes, and that the cost of those mistakes is almost zero, are the positive aspects of using VR headset in applied courses.

It promises to be a much more effective learning method than lectures with computers and slides. VR headset, which are an innovative technology and offer different experiences, attract students and increase their interest in the class. In addition, VR headset, which promise to be a powerful learning method, give students the opportunity to put theoretical knowledge into practice before much time has passed. In this respect, VR headset can be a powerful resource that can aid teaching by providing an environment that allows students to experience scenarios and situations rather than imagine them. In addition, VR headset have the potential to provide quick and easy access to the information needed in the classroom. It can have a positive impact on students' academic performance with benefits such as reducing students' cognitive load, making courses fun and interesting, and making subjects more concrete with experiential learning opportunities. VR

headset, which promise effective and efficient education, also stand out as an important tool for universities that want to reach world standards in education.

The positive change in participants' perceived ease of use aligns with international literature findings indicating that this variable plays a central role in VR acceptance decisions (Fussell et al., 2022; Wang et al., 2024). Participants' perception of VR as more practical than expected after the experience is similar to the phenomenon referred to in the literature as the "novelty effect" (Miguel-Alonso et al., 2024) and is consistent with previous studies suggesting that VR's novelty can trigger learning behaviors (Lampropoulos & Sidiropoulos, 2024). However, the literature frequently emphasizes that VR applications face barriers such as technical infrastructure, cost, hardware, and user readiness (Calisto & Sarkar, 2024), which aligns with the technical issues raised by participants in this study. Additionally, the international literature indicates that a direct relationship between "interest" and "learning success" cannot be established. While VR can increase motivation, it can also increase cognitive load, making learning more difficult (Slater, 2016). Similarly, Lin et al. (2024) emphasize that the process should be based on pedagogical alignment rather than technology alone. In tourism education, VR is commonly used for destination promotion, virtual tours, and cultural heritage simulations. In conclusion, this study supports the technology acceptance models and innovation effects approaches accepted in the international literature. It also highlights the technical, ergonomic, and pedagogical limitations of VR. Furthermore, it offers a unique contribution that emphasizes the context-dependence of applications in tourism education.

The study recommends providing the materials that may be necessary to use VR headset as a supporting tool in tourism courses, making tourism courses compatible with VR headset by experts, and/or preparing content accordingly. On the other hand, it is considered important to program VR headset in a cyber-secure way. Teachers should be provided with the necessary technical and theoretical training to adapt to this innovation. In addition, the gradual adoption of this innovation should be encouraged. Although the use of VR headset brings many benefits, it can also cause relatively minor problems and technical disruptions. One such problem is eye fatigue. In addition, some type of assistive device or lens may be required for students who wear glasse to comfortably use VR headset. In addition, short training sessions can be provided for students who are unfamiliar with the technology. Finally, the Internet infrastructure should be strong for the use of VR headset in schools.

5.1. Limitations

This study has some limitations. The data were collected only from the students who are studying in the Tourism Management Department of Dokuz Eylül University, Faculty of Tourism. In this sense, a study can be conducted by collecting data from students studying in other tourism departments in more universities. In addition, since the study was conducted using a qualitative interview technique, it does not allow generalization and it is recommended that a similar study be conducted quantitatively with a larger sample group.

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