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THE EFFECT OF BROCHURE AND VIRTUAL REALITY GOGGLES ON PURCHASING INTENTION IN DESTINATION MARKETING

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ABSTRACT

The aim of this research is to reveal the effects of brochures and virtual reality, which are among the promotional tools in destination marketing, on the purchasing intention and compare the results of these two promotional tools. The theoretical background of the research was established within the framework of the Theory of Planned Behavior (TPB). 120 potential tourists living in Eskişehir who intend to go on holiday, have been reached during the implementation phase of the research. Two questionnaires, i.e. the brochure involvement and virtual reality involvement questionnaires, were obtained from the participants. The data were analyzed through Smart PLS v.3.2.7. Research findings demonstrate that virtual reality is more successful in the perceived service quality and product attitude development. However, the effect of the brochure on the development of advertising attitudes is higher. Some suggestions are presented in line with the results of the research.

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INTRODUCTION

The synchronous development of technology and tourism has facilitated rapid access to information related to the tourism product, thus paving the way for the development process in information technologies. Accordingly, information communication technologies (ICT) have also caused changes in demand and supply. High demand for flexible, personalized options and quality of information has also personalized the entertainment and tourism behavior as a result of the increased use of ICT (Bethapudi, 2013). ICT offers a variety of tools for tourism marketing and management. This technology supports the interaction between the tourism businesses and the consumers, and thus redesigns the entire process of developing, managing, and marketing of the tourism products and destinations (Buhalis & O'Connor, 2005).

In recent years, the phenomenon of digitalization has become indispensable for tourism and activated the tourism sector. Tourism destinations are now marketed more efficiently, and promotions are more dynamic thanks to the digital facilities. The use of digital tools in marketing and promotion has increased the destination management as a result of the increased competition in the tourism sector (Rainisto, 2003). Destination marketing uses visual, audio and printed materials and technology based on different techniques. One of these marketing techniques is use of virtual reality (VR). Virtual reality is considered one of the most outstanding technologies. The basic idea is that the user is completely immersed in a virtual world created with a computer (Fritz et al., 2005).

The concept of virtual reality can be used as a tool for reducing the potential negative effects of the tourism industry on the environment and the relevant threats, or as a marketing tool to increase the attractiveness of a target (Cheong, 1995). The tourists can experience anything to eat or drink in a destination and get information about the touristic product from where they are located through the technology of reality that has increased the service quality and spatial features with virtual reality (Sarı & Kozak, 2005). The applications resulting from the rapid change in technology and the effect on the demand show the importance of virtual reality applications in the tourism sector for tourists who want to access information about the product as well as the experience before purchasing.

In the previous studies, the effect of virtual reality on destination marketing (Arat & Baltacıoğlu, 2016) and its effect on tourism (Özgüneş & Bozok, 2017) have been researched. The literature review shows that the number of researches that measure the effect of product promotion

materials on purchasing intent is very low. Both conceptual and empirical studies on virtual reality application have been conducted (Yung & Khoo-Lattimore, 2019). However, different promotional materials are compared (Wan et al., 2007; Jung et al., 2016) and are theory-based in very few studies (Haven & Botterill, 2003; Singh & Lee, 2009; Huang et al., 2010, 2013a, 2013b, 2016; Lee & Jeong, 2012; Dueholm & Smed, 2014; Han et al., 2014; Jung et al., 2015). Although academic studies are carried out to understand tourism and internet-based innovations, theory-based research is required to gain a solid knowledge about the user experience and consumer behavior in the virtual world, in the context of tourism (Huang et al., 2016). Additionally, according to Wei et al. (2019), the concept of virtual reality positively affects the theme park experience, recommendation, and intentions to visit again. According to Huang et al. (2012), virtual experience positively affects the behavioral intentions of tourists. According to Griffin et al. (2017), virtual reality applications increase the desire of individuals to learn more about destinations.

Therefore, the purpose of this research, which is based on theory of TPB, is to reveal the effects of a brochure and virtual reality on purchasing intention in destination marketing and to compare the relevant results. It is thought that this research will contribute to the relevant literature in four ways. First, it contributes to the determination of the antecedents of the behavioral intention to purchase a holiday. The second contribution is to reveal how brochure and virtual reality affect behavioral intention. The third contribution is pioneering in addressing the virtual reality. The fourth and final contribution is presentation of a model that explains the effect of brochure and virtual reality involvements on behavioral intention.

LITERATURE REVIEW

The first modern use of virtual reality was by the American computer scientist Jaron Lanier in the 1980s. The main purpose of Jaron was to enable computers to convey human-specific experiences within the technological future of human entrepreneurship, as it is in the technologies we transmit words by speaking (Lanier, 1992; Rheingold, 1992). The first modern virtual reality application belongs to the "sensororama" multisensory simulator developed by Morton Heiling in 1962. A motorcycle experience in New York City was tried with the feeling that it is in the real world thanks to the application. In the prototype, the perception of reality is enhanced with the presentation of odor, city noise, and wind. In the 1970s, virtual reality applications were developed for military purposes. Later, its use in different

fields has become widespread with the increasing curiosity and low cost of virtual reality (Lau & Lee, 2015).

Stone (1991) defined virtual reality as a multiple environment that addresses the human senses, developed to increase the communication link between human and machine. According to another definition, virtual reality is a technology product that aims to increase the interaction between human and machine, by not audio and visual, but by feeling (Oppenheim, 1993). Virtual reality, which creates an experience that is part of the virtual environment, changes in real-time by also changing the reactions and movements of the user (Wirth et al., 2007). Ausburn and Ausburn (2004), on the other hand, defined virtual reality as an interface that simulates any environment, gives the sense of being the user, gives the feeling of being right there, and enables the user to interact with the environment by allowing him/her to use his/her body. Those who have previously had any virtual reality experience which makes the individuals active members of an environment designed in a three-dimensional computer environment, defines this situation as "wade into the virtual world" (Anderson et al., 2001).

In this virtual world, which is created with the help of computer technology and gives the person the feeling of being real, the control belongs completely to the user. Here, users can test themselves, evaluate their environment and have the opportunity to practice (Rizzo & Kim, 2005). Two basic components are needed to create a virtual reality experience. The first is to record the real-world scene through video capture or create a virtual world with computer-generated images. Secondly, virtual reality devices are needed to enable users to step into this virtual world (Aronson-Rath et al., 2015). There are three basic criteria for creation of virtual reality application in a computer environment. These elements named "3I" in virtual reality are imagination, interaction and immersion. Imagination; the virtual world represents the imaginary space in which the information about the environment solely reveals the creator's mind and can be published and learned as soon as it is shared. Interaction; it is expressed as synchronous and bi-directional information exchange between the participant and the computer in virtual reality. Immersion means that the participant wades into the virtual environment through different devices (Burdea & Coiffet 2003; Gutiérrez et al., 2008). Hjalager (2015) evaluates virtual reality as an important tool that can be used in recreations in tourism trips, museums and events. In this context, it can be stated that VR will be among the leading promotional tools to be used in tourism marketing.

The brochure, on the other hand, is a carefully prepared advertising tool and an effective printed media that supports the profits by explaining the mission of the companies to enable promotion of a service or product (Şentürk, 2014). We come across brochures which have different features in format, design, and content not only in communication and marketing, but also in many areas such as tourism agencies, congress centers, hotel lobbies, information centers, resting areas, promotion, and postal sending in our daily life (Chang & Kinnucan, 1991; Zhou, 1997; Singh & Lee, 2009). Although there is limited research on brochures and their roles, it has been one of the most used materials from past to present (Molina & Esteban, 2006).

In the 21st century, information-based technologies are developing rapidly in the tourism sector as it is in many sectors, but brochures still popular because they are the tools that have proven themselves in delivering messages and affecting the other party. Brochures include verbal and visual messages to fulfil the communicative task. Brochures with human figures, in particular, interact significantly with the individuals of different ages, genders, and lifestyles (Jokela, 2011). Brochures (Brito & Pratas, 2015), which are among the tourist promotional tools, play an important role in the preference of tourist destinations, in particular. Tourists prefer a destination if they get information meeting their holiday expectations in the promotional destination brochure. The history of service quality, which is a new subject in the field of management, dates back to the 1980s. The quality of the service is the result of the comparison of the customers' requests related to the service they receive and their thoughts about the received service (Oliver, 1997). According to another definition, service quality is defined as a satisfactory but not equivalent attitude style that results from the comparison of expectation with performance (Parasuraman et al., 1985). Implementation and comprehension of service quality is a very difficult phenomenon because the quality of service has a heterogeneous structure, it is consumed where it is produced, it is abstract, it varies according to where, when, and by whom it is offered, and production and consumption can occur simultaneously (Harvey, 1998). Therefore, managing the service quality correctly is important for both businesses and touristic destinations.

The tendency to react to an ad stimulus in a desired or undesirable manner under a certain exposure is defined as an attitude towards advertising (Mackenzie et al., 1986). There are three components as cognitive, behavioral and emotional as well as brand attitude. The cognitive component is that it reflects consumers' evaluations and thoughts about the

service or product that is advertised. While the behavioral component expresses the desire of consumers to make positive or negative attitudes towards the advertised service or product, the emotional component characterizes the positive or negative emotions that the advertised service or product evokes for the consumer (De Pelsmacker et al., 2001).

Everything put on the market with an aim to attract the attention of consumers, encourage them to purchase, use, and consume, and satisfy their wishes and needs is called a product (Kotler, 2008). The product can be abstract or concrete, or it can be both abstract and concrete (McCarthy & Perreault, 1990). It is stated that the quality of the products produced and marketed by the companies forms the product philosophy that is relied on by an enterprise or organization. In another aspect, the product serves as a bridge between company managers and potential customers (Tek, 1999). While the product attitude is formed, a relatively permanent, one-dimensional summarization of the brand that energizes the attitude towards the brand and possible behavior occurs (Spears & Singh, 2004). In summary, customers first consider the product attitude when purchasing products. In this case, the primary targets of the companies in the traditional sector should be to establish a good product attitude in customers in order to influence their purchasing intentions (Yao & Huang, 2017).

The behavioral intention emerging as an output of the satisfaction process is defined as the preference of the customers whether to continue or not continue an action or organization (Anderson et al., 1994, p. 53). According to the marketing literature, behavioral intention strengthens the relationship of individuals with business and plays an important role in ensuring the continuity of these relations (Zeithaml et al., 1996). Behaviors, which are important factors in individuals' lives, can be evaluated before and after the consumer purchases products and services. This distinction in whether the person needs that product or service causes the equivalent of that product to enter the evaluation process and has effect on determination of the right alternative for such person (Altunışık et al., 2001).

RESEARCH MODEL AND HYPOTHESES

Theory of Planned Behavior (TPB)

One of the first studies on this concept is of psychology origin and based on Theory of Reasoned Action, and was conducted by Fishbein and Ajzen (1991). In theory, the authors have examined the relationship between

intentions, beliefs, behaviors, and attitudes (Bigné et al., 2005). After a certain period of time, TPB was introduced, in which the perceived behavioral control variable was added to the theory and it was expanded. According to this theory, the determinant of the behavior consists of the intentions of individuals regarding certain types of actions (Ajzen, 1991). TPB is based on the fact that an individual's behavior is stimulated by three factors. These are personal attitude, subjective norm and perceived behavioral control. If the individual perceives any behavior positively (personal attitude), the probability of performing that behavior increases. Again, within the scope of the theory, if a person's individual values are positive for that behavior, the probability of the individual to perform (subjective attitude) will increase. The third factor is that individual perceptions play an effective role in changing the behavior of the individual (perceived behavioral control) (Nunkoo & Ramkissoon, 2010).

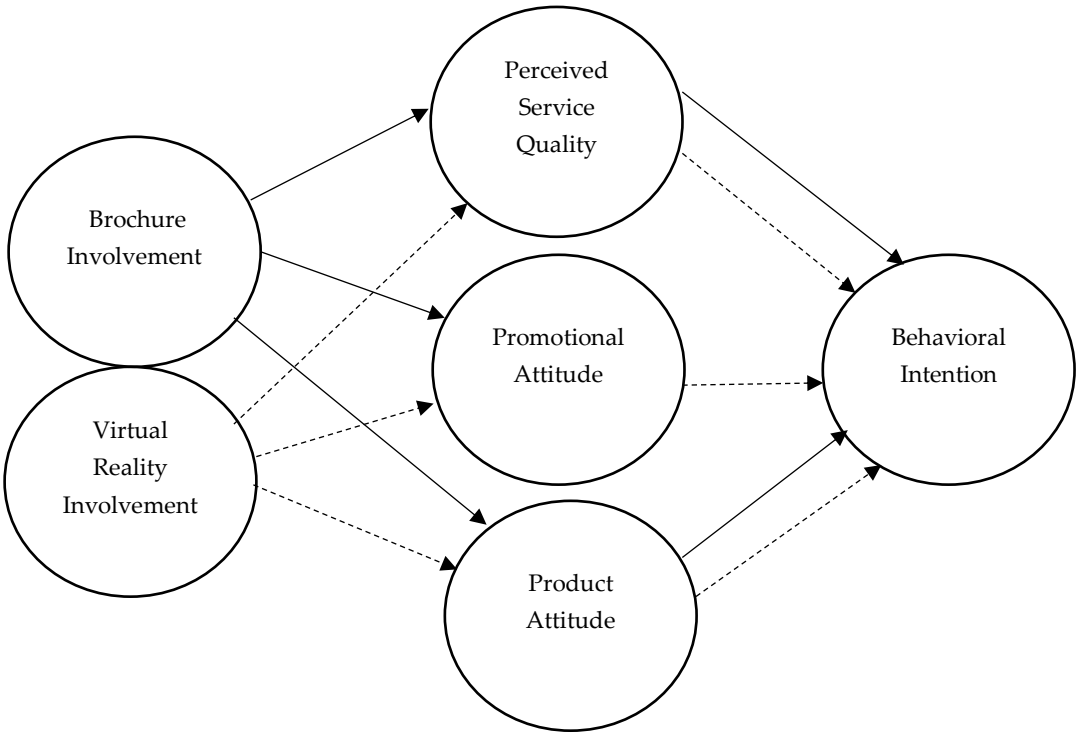

Figure 1. *Conceptual model*

* Straight lines belong to the brochure Involvement model. ** The dashed lines belong to the virtual reality model.

Recently, TPB has been frequently used by tourism researchers to explain the consumer behavior and their behavioral intentions (Ülker-Demirel & Çiftçi, 2020). For example, Han and Kim (2010) used TPB to explain re-visiting by the guests of green hotels. In this complex process, service quality perception positively affects the customer satisfaction and

attitudes, contributing to the formation of the intention to visit again. Jalilvand and Samiei (2012), on the other hand, based on TPB, have revealed that electronic word of mouth is an important factor in the choice of destinations and their intention to travel. In this context, electronic word of mouth positively influences individuals' attitudes, subjective norms and perceived behavioral controls, inducing an intention to travel. Similarly, Lam and Hsu (2004) supported with empirical evidence that TPB was an adequate theory in the statement of the stages of formation of travelers' behavioral intentions in their destination selection. In fact, personal attitude and perceived behavioral control, which are two important factors used in the statement of behavioral intention, were stronger than past behavior. In this context, this research aiming to determine any previous behavioral intentions of the tourists, is based on TPB. Thus, whether the tourists change their behavioral intentions after virtual reality and brochure involvement is explained based on the personal attitude and perceived behavioral control elements of TPB. The model explaining the theoretical structure of the research, which was developed in the light of all these studies is shown in Figure 1.

Brochure, Virtual Reality, Service Quality, and Behavioral Intention

Attitude in TPB is an important factor affecting behavioral intention (Ajzen, 1991). In this context, VR does not only provide a pleasant experience to the user, but also causes to develop an attitude towards liking and choosing the introduced destination. This positive attitude triggers a high level of user intention to visit (Tussyadiah et al., 2018). Therefore, the positive attitude towards the quality of service of the tourist product introduced through VR can help the tourist developing behavioral intent towards this tourist product. An important reason for this is the positive effect of the perceived quality of service on tourist satisfaction (Rajaratnam et al., 2014). In addition, tourists experiencing VR exhibit behavioral intention to visit the destination in the future (Jung et al., 2017; Gibson & O'Rawe, 2018). Another study showed that the use of VR positively influences visitors' theme park experience, increasing their intention to visit again and recommend the park to other people (Wei et al., 2019). As a marketing tool, VR offers a deeper experience of the product compared to other promotional tools, by allowing tourists to have an emotional experience towards the destination and can replace traditional promotional tools such as brochures (Gibson & O'Rawe, 2018). In this context, the following hypotheses have been developed to be tested.

H1a: Brochure involvement affects the perceived service quality positively.

H1b: Virtual reality involvement affects the perceived service quality positively.

H4a: The service quality perceived from the brochure affects the behavioral intention positively.

H4b: The service quality perceived from virtual reality application affects behavioral intention positively.

Brochure, Virtual Reality, Advertising Attitude, and Behavioral Intention

There is a strong link between the consumer's satisfaction with the advertisement and the sale of the product (Halley & Baldinger, 1991). The metaphors in the headlines and visuals of the advertisements positively affect the attitude towards the advertisement (Ang & Lim (2006). For this reason, an aesthetically pleasing design and compelling qualities are needed to enable consumers to buy and read a destination-specific brochure (Getz & Sailor, 1993). The positive advertising attitude created by promotional tools with these qualities provides the consumer to develop a positive attitude towards that brand (Walker & Dubitsky, 1994). VR which has richer content than traditional promotional tools does not only generate positive feelings for the advertised destination in tourists but also encourages the tourists to tell other people about it (Griffin et al., 2017). Therefore, VR, which is used to plan and manage a destination, can also be used in destination marketing (Guttentag, 2010). In the promotion of theme parks, the virtual experience is considered to be a more effective advertising tool than the brochure (Wan et al., 2007). On the other hand, the fact that the individual has positive thoughts about and attitudes towards the consequences of a particular behavior can lead the individual to that behavioral intention (Fishbein & Ajzen, 2011).

In this context, the fact that the tourist has positive thoughts about (attitudes towards) the tourist product promoted using VR and realizes the easiness (perceived behavioral control) of this experience (Ajzen, 1991) may cause the tourist to show behavioral intention towards such tourist product. The brochure offers short and limited advertisement, while VR offers the tourist a virtual destination experience. It should be noted that use of these two different promotional tools in advertisement also affects the level of information involvement of tourists affecting the purchasing behavior (Wan et al., 2007). Accordingly, the following hypotheses were developed for testing.

H2a: Brochure involvement affects the advertising attitude positively.

H2b: Virtual reality involvement affects advertising attitude positively.

H5a: Advertising attitude in brochures affects behavioral intention positively.
H5b: Advertising attitude in virtual reality application affects behavioral intention positively.

Brochure, Virtual Reality, Product Attitude, and Behavioral Intention

Information is an important factor affecting the purchasing process of tourism products (Băltescu, 2019). The brochure is one of the important sources of information for individuals (Andereck & Caldwell, 1994). In this context, the brochure has a significant impact on the decision-making process of purchasing the tourism products and services (Băltescu, 2019). On the other hand, the fact that the information has qualities such as visual, hedonic or aesthetic plays an important role in the tourist search for information related to the destination. Such information gives tourists some clues about the destination image (Vogt & Fesenmaier, 1998). In addition, potential tourists' perceptions of usefulness, ease of use, and enjoyment towards virtual tours affect their attitudes positively. This positive attitude towards the destination affects the destination selection of potential tourists (Pantano & Corvello, 2014). Accordingly, VR is more effectual in its product knowledge, product attitude, and purchasing intention compared to a static interface (Suh & Lee, 2005). For this reason, it can shape the attitudes and behaviors of the consumers (Tussyadiah et al., 2018). Moreover, the decline in the prices of VR tools allows more users to experience it, which makes VR an important marketing tool (Barnes, 2016). In this context, the following hypotheses have been developed for testing.

H3a: Brochure involvement affects the product attitude positively.
H3b: Virtual reality involvement affects the product attitude positively.
H6a: Product attitude in a brochure affects the behavioral intention positively.
H6b: Product attitude in virtual reality application affects the behavioral intention positively.

Mediation Role of the Perceived Service Quality, Advertising Attitude, and Product Attitude

Brochures (Băltescu, 2019) and advanced technologies (e.g. virtual tours) (Pantano & Corvello, 2014) play an important role in purchasing or selecting tourist products and services. VR has greatly changed the way that the tourists experience any tourist products and services (Loureiro et al., 2020). With this new form of experience, tourists can learn more about the

destination. This also affects the information involvement level of the tourist (Wan et al., 2007). The more the potential tourists' perceptions of risk and uncertainty towards the destination increase under TPB, the more the travel attitudes towards that destination decreases. In addition, the perception of uncertainty negatively affects the individuals' perceived behavioral control (Quintal et al., 2010). Therefore, the risk and uncertainty perceptions of potential tourists who are informed about the destination through brochure or VR can be reduced to allow purchasing the trip or choosing the destination. This diminishing uncertainty can positively affect perceived behavioral control, triggering the behavioral intention of the potential tourist. In addition, Bilim (2010) states that transferring the information in the brochure by designing it in a way that does not exceed the threshold of disturbing the consumer, positively affects the tourist's purchase intention. In addition, factors such as the general impression of the tourist products and services, perceived behavioral control and attitude positively affect the behavioral intention (Han & Kim, 2010).

H7a: The perceived service quality mediates the effect of the brochure involvement on the behavioral intention.

H7b: The perceived service quality mediates the effect of the virtual reality involvement on the behavioral intention.

H8a: Advertising attitude mediates the effect of the brochure involvement on the behavioral intention.

H8b: Advertising attitude mediates the effect of the virtual reality involvement on the behavioral intention.

H9a: Product attitude mediates the effect of the brochure involvement on the behavioral intention.

H9b: Product attitude mediates the effect of the virtual reality involvement on the behavioral intention.

RESEARCH METHOD

Measurement Instruments

The aim of this research is to reveal the effects of brochures and virtual reality on the purchasing intentions in destination marketing and to compare the relevant results. The data needed in this respect has been collected from the participants through a questionnaire. In this study, which was formed by TPB, the participants were presented a questionnaire covering the brochure involvement, virtual reality involvement, advertising attitude, product attitude, the perceived service quality and behavioral intention. In the process of developing the questionnaire statements, the

related studies in the literature were referred to. To measure the participants' interest levels, Hsu and Mo's (2009) research was utilized, and the scale used to reveal the advertising attitudes were adapted from Holmes and Crocker (1987) and Kim et al. (2002). In order to measure the attitudes of the participants towards the product, Yağcı et al.'s (2009) research was used. Studies of Dabholkar et al. (1996), Sweeney and Wyber (2002), and Hu and Jasper (2006) were utilized for the perceived service scale. Finally, Sweeney and Wyber's (2002) research was referred to for the behavioral intention scale. These scales were adapted to the field of tourism by Bilim (2010) and these scales turned out to be valid and reliable. Since these scales are taken from international literature, linguistic validity steps were carried out (Brislin, 1976).

Research Sample

This study is conducted in Eskişehir, Turkey as being one of the important destinations both sending and attracting tourists. As of 2019, Eskişehir has higher per capita income and lower income inequality than the Turkish average (TUIK, 2020a). The city was chosen because the people of Eskişehir enjoys the tourist products and services in the same extent as a potential tourist. In 2019, on the other hand, the Netherlands attracts more than 20 million foreign tourists (UNWTO, n.d.). Amsterdam is home to over 4 million foreign tourists annually (amsterdam.org). In 2019, however, the number of Turkish people visiting the Netherlands is around 45,000 (TUIK, 2020b). These data show that Amsterdam is a less preferred destination by the Turkish people. At this point, Amsterdam is a convenient destination to compare the effects of brochures and virtual reality on promoting a destination that has not been experienced yet by the potential tourists. The reason behind choosing Amsterdam is that it is a popular destination, it has 3600 and 4K video compatible with virtual reality goggles, and the majority of the people of Eskişehir have not been in Amsterdam before.

The participants of the study were selected by convenience sampling method and a total of 120 people were reached between June 1 and August 1, 2019. Since the analysis phase of the research takes too long, it is essential that the participants are voluntary. Participants were asked to ignore any elements (such as holiday fees, time restrictions, passports, and visa transactions) that could restrict their travel abroad when filling out the questionnaire.

Two different questionnaires about the effect of brochure and virtual reality application on the behavioral intention were used in the study. First,

the participants were requested to carefully review the brochure presented to them in order to get an idea of Amsterdam. They were expected to read the brochure and learn about the destination while reviewing it. All these steps were also followed for the virtual reality video promoting Amsterdam. Additionally, each participant was initially expected to complete the brochure-related process and then the virtual reality application. Whether each participant completed the processes in sequence was checked by the authors. As a result, it has been found that each participant completed both stages. In the view of such information, the participants were given a brochure introducing Amsterdam and they were asked to examine it at the first stage of implementation. In the second stage of implementation, they were requested to fill out the brochure questionnaire carefully by taking into account the brochure they examined. In the third stage, they were given the promotional video of Amsterdam, which was prepared in 360 degrees and in 4K, and they watched it by means of virtual reality goggles. In the fourth stage, they were requested to fill out the virtual involvement questionnaire by taking into account the virtual reality experiences they had. The participants spent approximately 20 minutes to fill out the two questionnaires, i.e. a brochure involvement and a virtual reality involvement questionnaire.

Data analysis

Smart PLS v.3.2.7 statistics program and Partial Least Squares technique were used in testing the measurement model and structural model due to insufficient sample volume (n: 120). In the study, the two-step approach was followed; first the measurement model and then the structural equation model was tested (Anderson & Gerbing, 1988). In addition, bootstrapping technique was used in determining the mediation hypotheses (Hair et al., 2014).

RESULTS

Demographic Findings

The findings about the demographic characteristics of the individuals participating in the research are presented in Table 1. According to Table 1, it is seen that 52.5% of the participants are male and 63.3% are married. The examination of the ages of the participants shows that the highest participation is in the 30-34 age group with 20.8% and in the 35-39 age group with 17.5%. Considering the educational status of the participants, the

highest participation is observed in undergraduate and high school graduates with 33.3% and 25%, respectively. Finally, it is seen that the monthly income of the individuals with high participation ranged between 1500₺-1999₺ and 2000₺-2499₺ respectively.

Table 1. *Characteristics of the Subjects*

Variable		n	%	Variable		(n)	%
Gender	Female	57	47.5		18-24	16	13.3
	Male	63	52.5		25-29	17	14.2
Marital Status	Single	44	36.7		30-34	25	20.8
	Married	76	63.3	**Age**	35-39	21	17.5
	1500₺-1999₺	27	22.5		40-44	16	13.3
	2000₺-2499₺	22	18.3		45-49	13	10.8
	2500₺- 2999₺	12	10.0		50 and above	12	10.0
Monthly Income	3000₺-3499₺	18	15.0		Primary education	7	5.8
	3500₺-3999₺	7	5.8	**Educational Status**	High School	30	25.0
	4000₺- 4499₺	13	10.8		Associate Degree	23	19.2
	4500₺-4999₺	14	11.7		Undergraduate	40	33.3
	5000₺ and above	7	5.8		Graduate	20	16.7
Total		120	100	**Total**		120	100

First, the reliability and validity of measurement model was tested. The basic logic behind creating the measurement model is to test its validity and reliability for assessing whether the measured structures are measured correctly (Merli et al., 2018). Factor loads, Cronbach Alpha (CA), Composite Reliability (CR), and average variance extracted (AVE) values were calculated in order to ensure content validity in the study. Accordingly, it is suggested that the factor loads of items to constructs are above 0.70, CR is above 0.70 and AVE value is above 0.50 (Hair et al., 2017; Ali et al., 2018). As seen in Table 2, all factor loads and alpha values are above 0.70. In addition, it is seen that AVE values are greater than 0.50 and CR values are above 0.70. Therefore, convergent validity was fulfilled in both models (Ali et al., 2018). In this study, a statement was removed at the test stage of the brochure involvement measurement model due to its low factor load. Factor loads of the scale items of the brochure involvement model 0.880-0.963 are as follows: CA values are 0.918-0.977; CR values are at the range of 0.948-0.980, and AVE values are at the range of 0.859-0.892. On the other hand, factor loads of the scale items of the virtual reality involvement model 0.781-0.973 are as follows: CA values are 0.936-0.980, CR values range between 0.956 and 0.983, and AVE values range from 0.845 to 0.923. Considering these values, it can be said that the content validity of the models has been established in the research (see Table 2).

Table 2. *Findings of the Measurement Model*

	BROCHURE MODEL				VIRTUAL REALITY MODEL			
Variables	**Factor Loads**	***Cronbach's Alpha***	**CR**	**AVE**	**Factor Loads**	***Cronbach's Alpha***	**CR**	**AVE**
Interest		0.972	0.977	0.876		0.975	0.981	0.911
M1	0.963				0.948			
M2	0.951				0.973			
M3	0.928				0.968			
M4	0.937				0.950			
M5	0.924				0.931			
M6	0.913				0.948			
Product Attitude		0.918	0.948	0.859		0.936	0.956	0.845
M7	Removed				0.781			
M8	0.880				0.954			
M9	0.959				0.964			
M10	0.940				0.964			
Behavioral Intention		0.939	0.961	0.892		0.959	0.973	0.923
M11	0.951				0.967			
M12	0.957				0.956			
M13	0.924				0.960			
Service Quality		0.977	0.980	0.860		0.980	0.983	0.879
M14	0.912				0.917			
M15	0.947				0.939			
M16	0.940				0.946			
M17	0.924				0.945			
M18	0.924				0.915			
M19	0.929				0.944			
M20	0.931				0.959			
M21	0.909				0.935			
Advertising Attitude		0.952	0.965	0.875		0.948	0.962	0.864
M22	0.910				0.913			
M23	0.958				0.945			
M24	0.926				0.939			
M25	0.946				0.921			

Table 3. *Fornell-Larcker Discriminant Validity Criteria for Models*

	Fornell	**1**	**2**	**3**	**4**	**5**
BROCHURE MODEL	1.Behavioral Intention	**0.944**				
	2. Service Quality	0.854	**0.927**			
	3. Advertising Attitude	0.581	0.484	**0.935**		
	4. Product Attitude	0.794	0.732	0.590	**0.927**	
	5. Brochure Involvement	0.460	0.412	0.795	0.498	**0.936**
VIRTUAL REALITY MODEL	Fornell	**1**	**2**	**3**	**4**	**5**
	1. Behavioral Intention	**0.961**				
	2. Service Quality	0.869	**0.938**			
	3. Involvement	0.558	0.646	**0.954**		
	4. Advertising Attitude	0.605	0.569	0.692	**0.930**	
	5. Product Attitude	0.838	0.827	0.670	0.669	**0.919**

Fornell-Larcker Criteria and Heterotrait-Monotrait Ratio of correlation (HTMT) values were calculated to assess the discriminant validity. According to the Fornell-Larcker criterion, the square of the average variance (AVE) value described in each structure should be greater than the correlation between the structure and other structures (Hair et al., 2014). As seen in Table 3, the discriminant validity of the two models has been established.

HTMT value is a better way to check the discriminant validity compared to the traditionally accepted Fornell-Larcker criterion for discriminant validity (Ali et al., 2018). The fact that this value is below the limit value of 0.90 indicates that the criterion validity is established (Rodríguez-Victoria et al., 2017). As shown in Table 4, this value is observed to be within acceptable limits in both models.

Table 4. *HTMT Discriminant Validity Criteria for Models*

	HTMT	**1**	**2**	**3**	**4**	**5**
BROCHURE MODEL	1. Behavioral Intention					
	2. Service Quality	0.890				
	3. Advertising Attitude	0.615	0.501			
	4. Product Attitude	0.851	0.772	0.629		
	5. Brochure Involvement	0.479	0.419	0.824	0.524	
	HTMT	**1**	**2**	**3**	**4**	**5**
VIRTUAL REALITY MODEL	1. Behavioral Intention					
	2. Service Quality	0.895				
	3. Involvement	0.576	0.660			
	4. Advertising Attitude	0.634	0.590	0.719		
	5. Product Attitude	0.884	0.864	0.701	0.708	

Structural Model Test

Standardized Root Mean Square Residual (SRMR) value of the means of the standardized error squares as the good fit of the research models was taken into consideration as the model fit value. Henseler et al. (2016) state that SRMR is a recommended criterion as a model fit criterion. SRMR value below 0.08 indicates that the model has a good fit (Hu & Bentler, 1999). In this study, SRMR value of brochure involvement model was found to be 0.041 and SRMR value of virtual reality model was found as 0.038. In addition, the value of NFI for the brochure model and the virtual model were 0.95 and 0.92 respectively. These values are acceptable for both models (Tabachnick & Fidell, 2007). Therefore, its structural model is compatible with the data.

Method coefficients of structural models are presented in Table 5. According to the findings of the brochure involvement model, involvement positively and significantly affects the quality of service (β = 0.412; p <0.01), advertising attitude (β = 0.795; p <0.01), product attitude (β = 0.498; p <0.01). In addition, service quality (β = 0.575; p <0.01), advertising attitude (β = 0.181; p <0.05), and product attitude (β = 0.301; p <0.01) positively and significantly affect behavioral intention. In line with these findings, H1a, H2a, H3a, H4a, H5a, and H6a hypotheses are supported.

According to the findings of the virtual reality model, involvement positively and significantly affects the quality of service (β = 0.646; p <0.01), advertising attitude (β = 0.692; p <0.01), product attitude (β = 0.670; p <0.01). In addition, while the quality of service (β = 0.599; p <0.01) and product attitude (β = 0.362; p <0.01) positively and significantly affect behavioral intention, the effect of advertising attitude on behavioral intention is insignificant (β = 0.137; p> 0.01). In the light of these findings, H1b, H2b, H3b, H4b, and H6b hypotheses are supported, but the H5b hypothesis is rejected. The bootstrapping technique was used to evaluate the direct effects. The results of bootstrapping technique and the values of R^2 for both models were given in Table 5.

Table 5. *Path Coefficients of the Models*

	Variables	Coefficients	t-values	5% lowest values	95% highest value	R^2	Result
BROCHURE MODEL	**Involvement -> Service Quality**	0.412	5.503*	0.278	0.526	0.162	Supported
	Involvement -> Advertisement	0.795	20.143*	0.712	0.849	0.628	Supported
	Involvement -> Product Attitude	0.498	7.607*	0.372	0.594	0.241	Supported
	Service Quality -> Behavioral Intention	0.575	8.596*	0.462	0.683	0.795	Supported
	Advertisement -> Behavioral Intention	0.181	2.136**	0.046	0.325		Supported
	Product Attitude -> Behavioral Intention	0.301	4.470*	0.191	0.412		Supported
	Variables	**Coefficients**	**t-values**	**5% lowest values**	**95% highest value**	**R^2**	**Result**
VIRTUAL REALITY MODEL	**Involvement -> Service Quality**	0.646	8.945*	0.510	0.753	0.412	Supported
	Involvement -> Ad Attitude	0.692	14.972*	0.609	0.759	0.474	Supported
	Involvement -> Product Attitude	0.670	10.760*	0.550	0.759	0.444	Supported
	Service Quality -> Behavioral Intention	0.599	6.003*	0.440	0.766	0.807	Supported
	Advertisement -> Behavioral Intention	0.137	1.592	-0.019	0.265		**Not supported**
	Product Attitude -> Behavioral Intention	0.362	3.486*	0.185	0.522		Supported

* p<0.01, **p<0.05

The bootstrapping technique also was used to determine the mediation hypotheses. As claimed by Nitzl et al. (2016), t-value may be

misleading in determining the mediation effect, so the calculation of confidence interval is more accurate.

In addition, the steps proposed by Zhao et al. (2010) were observed in the mediation analysis. Bootstrap method is preferred in the evaluation of indirect effects. It is considered a very effective method for evaluating certain indirect effects of the bootstrap method (Preacher & Hayes 2008). In the bootstrap method, if the lower and upper confidence intervals are different from the class, it is considered that the indirect effects are significant, so the mediation hypothesis is supported (Zhao et al., 2010; Ledermann & Macho, 2009). Accordingly, the way to estimate parameters in the 95% confidence interval with 5000 times resampling method was used in the study.

As seen in Table 6, the lower and upper limit value ranges of the indirect effects of the brochure involvement model do not include any zero value. Therefore, the mediation roles of service quality, advertising attitude, and product attitude variables are significant. Accordingly, the indirect effect of involvement on behavioral intention through service quality is 0.236. The indirect effect of involvement on behavioral intention through advertising attitude is also 0.145. Finally, the indirect effect of involvement on behavioral intention through product attitude is 0.151. Considering that the effect of involvement on behavioral intention is not significant, it is possible to claim that the type of mediation is complementary mediation. H7a, H8a, and H9a hypotheses are supported.

Table 6. *Indirect Effects of Involvement on Behavioral Intention*

BROCHURE MODEL						
Variables	**Original Sample**	**t-Value**	**p-Value**	**5% lowest values**	**95% highest value**	**Result**
Involvement -> Ser. Qual. -> Behav. Int.	0.236	4.511	0.000	0.152	0.325	Supported
Involvement -> Ad. Attit. -> Behav. Int.	0.145	2.130	0.033	0.036	0.259	Supported
Involvement -> Prod. Attit. -> Behav. Int.	0.151	3.678	0.000	0.089	0.225	Supported
VIRTUAL REALITY MODEL						
Variables	**Original Sample**	**t-Value**	**p-Value**	**5% lowest values**	**95% highest value**	**Result**
Involvement -> Ser. Qual. -> Behav. Int.	0.387	4.945	0.000	0.271	0.533	Supported
Involvement -> Ad. Attit. -> Behav. Int.	0.095	1.602	0.109	-0.012	0.182	**Not supported**
Involvement -> Prod. Attit. -> Behav. Int.	0.242	3.233	0.001	0.125	0.370	Supported

When the findings of the virtual reality model are examined; the indirect effect of involvement on behavioral intention through service quality is 0.387. The indirect effect of involvement on behavioral intention through product attitude is 0.242. The lower and upper limit values of the indirect effects of the model do not include any zero value. However, when the indirect effect of involvement on behavioral intention through advertising attitude is examined, it is seen that the lower and upper limit values of indirect effect include zero. Therefore, the mediating role of advertising attitude could not be confirmed. According to these findings, H7b and H9b hypotheses are supported, but H8b is rejected.

DISCUSSION AND CONCLUSION

Brochure implementation results of the research suggest that brochure involvement affects the service quality, advertising attitude, and product attitude positively. In addition, service quality, advertising attitude, and product attitude positively affect behavioral intention. Another important result obtained is that the quality of advertisement, advertising attitude, and product attitude mediate the effect of brochure involvement on behavioral intention.

Virtual reality results of the research suggest that involvement in virtual reality positively affects the service quality, advertising attitude, and product attitude. Moreover, it has been determined that the service quality and product attitude positively affect the behavioral intention, but the effect of advertising attitude on behavioral intention is insignificant. In addition, it has been found that involvement positively affects the behavioral intention through the perceived service quality and product attitude. However, the advertising attitude does not have a mediation role in the effect of involvement on behavioral intention. This unexpected result shows that the attitude towards advertising has no effect on the transformation of the individual's virtual reality involvement into behavioral intention. This can be explained by the effect of the method used in advertising activities depending on the characteristics of the product to be promoted (Wan et al., 2007).

Comparison of Virtual Reality and Brochure Involvement Results

Although virtual reality offers more information, visual and audio elements about the product being promoted compared to the brochure; the involvement in brochure is more effective on the advertising attitude of individuals. However, Wan et al. (2007) found that virtual experience is

more effective than traditional brochure method in advertising methods for theme parks. In the same research, no significant difference has been found between the virtual experience and the brochure in the advertising method for natural parks.

This research contributes the marketing literature by revealing the effects of virtual reality application on the perceived service quality, product attitude, and behavioral intention. The studies in the field of marketing reveal the effects of brochure involvement on advertising attitude, product attitude, and the perceived service quality. However, the effects of virtual reality application have not been extensively studied in the literature. Therefore, this research integrated the virtual reality application, which is widely used with the developing technology and economic opportunities, into the research model and demonstrated the role of virtual reality application in the process from involvement to purchase intention. While virtual reality increases the tourist experience and sense of belonging, it also increases the spatial consciousness level of the tourist and triggers positive feelings towards the visited place. Therefore, virtual reality application can be used as a tool in destination marketing (Pantelidis et al., 2018).

The results of the brochure implementation show that the advertising attitude positively affects the behavioral intention. At this point, the results of this study are in line with the research findings of Halley and Baldinger (1991) and Walker and Dubitsky (1994). However, the results of the virtual reality application have revealed that there is no significant relationship between advertising attitude and behavioral intention. Using virtual reality in destination marketing is more advantageous than the brochure, which provides limited information. The visitor who gets limited information from the brochure will not be happy with his vacation because it does not meet his expectations throughout his experience. In contrast, virtual reality provides more comprehensive information about the destination to the visitor (Cheong, 1995). In destination marketing, virtual reality is suggested as a tool that positively affects the image of the destination (McFee et al., 2019). Virtual reality applications have the potential to be an effective tool that can be used to convey cultural values. Virtual reality application can be used as a useful tool especially for young people because of the interesting features that this technology offers (Carrozzino & Bergamasco, 2010). As a result, virtual reality will positively affect the efficiency and profit maximization of businesses in the sector (Durmaz et al., 2018).

This research has contributed to the related literature in four ways. First, the determinants of behavioral intention have been found out. Second, how brochure and virtual reality involvements affect behavioral intention has been revealed. Third, it pioneers in dealing with virtual reality involvement. The final contribution is that the model explaining the effect of brochure and virtual reality involvement on behavioral intention is generally accepted.

Theoretical Implications

More theory-based research on the concept of virtual reality is needed (Huang et al., 2016; Yung & Khoo-Lattimore, 2019). Therefore, this research could be considered a response to the calls for such studies. This research focuses on the application of virtual reality and explains the relationships between the research variables with the help of theory of planned behavior. As a result of the research, it is seen that brochure and virtual reality involvement have positive effects on behavioral intention through the perceived service quality, advertising attitude, and product attitude. It has been demonstrated that the involvement in virtual reality alone does not affect behavioral intention through advertising attitude.

Other findings, except for this finding, overlap with the personal attitude and perceived behavior control factors of TPB. In fact, the participants have developed a personal attitude towards the destination (Amsterdam) after examining the given materials. In addition, this research is one of the few studies that discuss the relationship between virtual reality concept and other variables within the scope of TPB (Han et al., 2014; Huang et al., 2010). In view of all information, the research contributes to TPB in two different ways. The first contribution is the general support of the model in which virtual reality involvement created under TPB is considered the main variable. The second contribution is that the brochure involvement model, which is also based on the theoretical basis of TPB, is fully supported. In addition, the research findings contributed to personal attitude and perceived behavior control factors that are among the factors of TPB. This is a clear indication that the research has made an original contribution to the theory. Additionally, it creates a theoretical background for future research in the field of virtual reality.

Practical Implications

When the effects of brochure involvement and virtual reality involvement on other variables are compared; VR involvement has a higher impact on the perceived service quality and product attitude. In addition, it is seen

that virtual reality gives more effective results about the effect of the perceived service quality and product attitude on behavioral intention. In comparison to the indirect effects in the model, it has been revealed that virtual reality involvement, the perceived service quality, and product attitude have higher mediating effects. These results shows that use of brochures in the process of transforming involvement into behavioral intention is more successful especially at the advertising attitude phase. However, it is seen that virtual reality application presents better results for the perceived service quality and product attitude. Therefore, if the destination marketers want to achieve a goal for the advertising attitude, they prefer the brochure, but if they want to develop an attitude towards the service quality or the product, it will be useful for them to choose virtual reality application to achieve their goals. This research shows that virtual reality can be an important marketing tool in tourism (Cheong, 1995). Individuals who will participate in tourism activities can draw inferences about the quality of services for touristic products thanks to their virtual reality experience (Sarı & Kozak, 2005). Therefore, virtual reality offers tourists many advantages in choosing a tourism product with the unique experience. It offers important advantages for businesses in the marketing of destinations as well (Özgüneş & Bozok, 2017). One of its most important advantages is more transparency in the promotion of products (Arat & Baltacıoğlu, 2016). A good product attitude that may affect the purchase intention should be created (Yao & Huang, 2017). This research shows that virtual reality application is more successful than traditional brochure in creating product attitude. Considering the widespread usage and the speed of technological development and its effects on individuals and businesses, this research demonstrates that virtual reality application can ensure more satisfactory contributions to the demands and needs of the new generation that grows along with the technology. In the light of all this information, tour operators and travel agencies using virtual reality in destination marketing will provide convenience to both businesses and consumers.

Limitations and Recommendations

The main limitation of the research is that the model designed was evaluated only in Eskişehir region. The evaluation of this model in different regions or countries will contribute to the model. Furthermore, the research deals with only the destination of Amsterdam. The evaluation of different destinations by comparing them for future research will contribute both to the literature and the model of research. Finally, the implementation of the model to customers of travel agencies or tour operators will bring a different perspective to the research.

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REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211.

Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*, *30*(1), 514-538.

Altunışık, R., Özdemir, Ş., & Torlak, Ö. (2001). *Modern pazarlama.* İstanbul: Değişim Yayınları.

Andereck, K., & Caldwell, L. L. (1994). The influence of tourists' characteristics on ratings of information sources for an attraction. *Journal of Travel and Tourism Marketing*, *2*(2-3), 171-190.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: a review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411-423.

Anderson, P. L., Rothbaum, B. O., & Hodges, L. (2001). Virtual reality: Using the virtual world to improve quality of life in the real world. *Bulletin of The Menninger Clinic*, *65*(1), 78- 91.

Anderson, W. E., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share and profitability: findings from Sweden. *Journal of Marketing*, *58*(3), 53-66.

Ang, S. H., & Lim, E. A. C. (2006). The influence of metaphors and product type on brand personality perceptions and attitudes. *Journal of Advertising*, *35*(2), 39-53.

Arat, T., & Baltacıoğlu, S. (2016). Sanal gerçeklik ve turizm. S*osyal Bilimler Meslek Yüksekokulu Dergisi*, *19*(1), 103-118.

Aronson-Rath, R., Milward, J., Owen, T., & Pitt, F. (2015). *Virtual reality journalism*. A Reseach Project By the Tow Center for Digital Journalism at Columbia University. A Report, P.12.

Ausburn, L. J., & Ausburn, F. B. (2004). Desktop virtual reality: A powerful new technology for teaching and research in industrial teacher education. *Journal of Industrial Teacher Education*, *41*(4), 1-16.

Băltescu, C. A. (2019). Do we still use tourism brochures in taking the decision to purchase tourism products? *Annals of 'Constantin Brancusi' University of Targu-Jiu. Economy Series, 6*, 110-115.

Barnes, S. J. (2016). Understanding virtual reality in marketing: Nature, implications and potential (November 3, 2016). Available at SSRN: https://ssrn.com/abstract=2909100

Bethapudi, A. (2013). The role of ICT in tourism industry. *Journal of Applied Economics and Business*, *1*(4), 67-79.

Bigné, J. E., Andreu, L., & Gnoth, J. (2005). The theme park experience: An analysis of pleasure, arousal and satisfaction. *Tourism Management*, *26*(6), 833–844.

Bilim, Y. (2010). *Turizm pazarlamasında görsel ve yazılı tanıtım materyali içeriğinin satın alma niyetine etkileri: Eksik bilgiye dayalı çıkarım yaklaşımı*. Unpublished Doctoral Dissertation, Adnan Menderes University, Aydın, Turkey.

Brislin, R. W. (1976). Comparative research methodology: Cross-cultural studies. *International Journal of Psychology*, *11*(3), 215-229.

Brito, P. Q., & Pratas, J. (2015). Tourism brochures: Linking message strategies, tactics and brand destination attributes. *Tourism Management*, *48*, 123-138.

Buhalis, D., & O'Connor, P. (2005). Information communication technology revolutionizing tourism. *Tourism Recreation Research*, *30*(3), 7-16.

Burdea, G., & Coiffet, P. (2003). *Virtual reality technology* (Second Edition). New Jersey: John Wiley & Sons.

Carrozzino, M., & Bergamasco, M. (2010). Beyond virtual museums: Experiencing immersive virtual reality in real museums. *Journal of Cultural Heritage*, *11*(4), 452-458.

Chang, H. S., & Kinnucan, H. W. (1991). Advertising, information, and product quality: the case of butter. *American Journal of Agricultural Economics*, *73*(4), 1195-1203.

Cheong, R. (1995). The virtual threat to travel and tourism. *Tourism Management, 16*(6), 417-422.

Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (1996). A measure of service quality for retail stores: scale development and validation. *Journal of the Academy of Marketing Science, 24*(1), 3-16.

De Pelsmacker, P., Geuens, M., & Van Den Bergh, J. (2001). *Marketing communications: A European perspective.* New York: Prentice Hall.

Dueholm, J., & Smed, K. M. (2014). Heritage authenticities – a case study of authenticity perceptions at a Danish heritage site. *Journal of Heritage Tourism*, *9*(4), 285–298.

Durmaz, C., Bulut, Y., & Tankuş E. (2018). Sanal gerçekliğin turizme entegrasyonu: Samsun'daki 5 yıldızlı otellerde uygulama. *Turkish Journal of Marketing, 3*(1), 32-49.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research reading*, MA: Addison-Wesley.

Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach.* NY: Psychology press.

Fritz, F., Susperregui, A., & Linaza, M. T. (2005). Enhancing cultural tourism experiences with augmented reality technologies. *6th International Symposium on Virtual Reality*, Archaeology and Cultural Heritage (VAST).

Getz, D., & Sailor, L. (1993). Design of destination and attraction-specific brochures. *Journal of Travel and Tourism Marketing, 2*(2/3), 111–131.

Gibson, A., & O'Rawe, M. (2018). Virtual reality as a travel promotional tool: Insights from a consumer travel fair. In *Augmented reality and virtual reality* (pp. 93-107). Springer, Cham.

Griffin, T., Giberson, J., Lee, S. H., Guttentag, D., Kandaurova, M., Sergueeva, K., & Dimanche, F. (2017). Virtual reality and implications for destination marketing. *Proceedings of the 48th Annual Travel and Tourism Research Association (TTRA), International Conference*, Quebec City, Canada.

Gutiérrez, M. A., Vexo, F., & Thalmann, D. (2008). *Stepping into virtual reality.* Switzerland: Springer.

Guttentag, D. A. (2010). Virtual reality: Applications and implications for tourism. *Tourism Management, 31*(5), 637-651.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A *primer on partial least squares structural equations modeling (PLS-SEM).* London: Sage Publications.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM),* 2nd edition. Newbury Park, CA: Sage Publications, Inc.

Halley, R. I., & Baldinger, A. L. (1991). The ARF copy research validity project. *Journal of Advertising Research*, *31*(2), 11–22.

Han, H., & Kim, Y. (2010). An investigation of green hotel customers' decision formation: developing an extended model of the theory of planned behavior. *International Journal of Hospitality Management*, *29*(4), 659-668.

Han, H., Hwang, J., & Woods, D. P. (2014). Choosing virtual – rather than real – leisure activities: An examination of the decision–making process in Screen-Golf participants. *Asia Pacific Journal of Tourism Research, 19*(4), 428–450.

Harvey, J. (1998). Service Quality: A tutorial. *Journal of Operations Management, 16*(5), 583-597.

Haven, C., & Botterill, D. (2003). Virtual learning environments in hospitality, leisure, tourism and sport: A review. *Journal of Hospitality, Leisure, Sport and Tourism Education*, *2*(1), 76–93.

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Industrial Management & Data Systems, 116*(1), 2–20.

Hjalager, A. M. (2015). 100 Innovations that transformed tourism. *Journal of Travel Research*, *54*(1), 3-21.

Holmes, J. H., & Crocker, K. E. (1987). Predispositions and the comparative effectiveness of rational, emotional and discrepant appeals for both high involvement and low involvement products. *Journal of The Academy of Marketing Science, 15*(1), 27-35.

Hsu, J. L., & Mo, R. H. C. (2009). Consumer responses to incomplete information in print apparel advertising. *Journal of Fashion Marketing and Management: An International Journal, 13*(1), 66-78.

Hu, H., & Jasper, C. R. (2006). Social cues in the store environment and their impact on store image. *International Journal of Retail & Distribution Management, 34*(1), 25-48.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.

Huang, Y. C., Backman, K. F., Backman, S. J., & Chang, L. L. (2016). Exploring the implications of virtual reality technology in tourism marketing: An integrated research framework. *International Journal of Tourism Research, 18*(2), 116-128.

Huang, Y.-C., Backman, S. J., & Backman, K. F. (2010). Student attitude toward virtual learning in second life: A flow theory approach. *Journal of Teaching in Travel & Tourism, 10*(4), 312–334.

Huang, Y. C., Backman, S. J., & Backman, K. F. (2012). Exploring the impacts of involvement and flow experiences in second life on people's travel intentions. *Journal of Hospitality and Tourism Technology, 3*(1), 4-23.

Huang, Y.-C., Backman, S. J., Backman, K. F., & Moore, D. (2013a). Exploring user acceptance of 3D virtual worlds in travel and tourism marketing. *Tourism Management, 36*, 490–501.

Huang, Y.-C., Backman, S. J., Chang, L.-L., Backman, K. F., & McGuire, F. A. (2013b). Experiencing student learning and tourism training in a 3D virtual world: An exploratory study. *Journal of Hospitality, Leisure, Sport & Tourism Education, 13*, 190–201.

Jalilvand, M. R., & Samiei, N. (2012). The impact of electronic word of mouth on a tourism destination choice: testing the theory of planned behavior (TPB). *Internet Research: Electronic Networking Applications and Policy*, *22*(5), 591-612.

Jokela, S. (2011). Building a facade for Finland: Helsinki in tourism imagery. *Geographical Review, 101*, 53-70.

Jung, T., Chung, N., & Leue, M. C. (2015). The determinants of recommendations to use augmented reality technologies: The case of a Korean theme park. *Tourism Management*, *49*, 75–86.

Jung, T., tom Dieck, M. C., Lee, H., & Chung, N. (2016). Effects of virtual reality and augmented reality on visitor experiences in museum. In *Information and communication technologies in tourism 2016* (pp. 621-635). Springer, Cham.

Jung, T., tom Dieck, M. C., Moorhouse, N., & tom Dieck, D. (2017). Tourists' experience of virtual reality applications. In *2017 IEEE International Conference on Consumer Electronics (ICCE)* (pp. 208-210). IEEE.

Kim, H. S., Damhorst, M. L., & Lee, K. H. (2002). Apparel involvement and advertisement processing: A model. *Journal of Fashion Marketing and Management: An International Journal, 6*(3), 277-302.

Kotler, P. (2008). *Principles of marketing* (12th Ed.). London: Pearson Education.

Lam, T., & Hsu, C. H. C. (2004). Theory of planned behavior: Potential travelers from China. *Journal of Hospitality and Tourism Research, 28*(4), 463–482.

Lanier, J. (1992). Virtual reality: The promise of the future. *Interactive Learning International*, *8*(4), 275-79.

Lau, K. W., & Lee, P. Y. (2015). The use of virtual reality for creating unusual environmental stimulation to motivate students to explore creative ideas. *Interactive Learning Environments, 23*(1), 3-18.

Ledermann, T., & Macho, S. (2009). Mediation in dyadic data at the level of the dyads: A structural equation modeling approach. *Journal of Family Psychology*, *23*(5), 661-670.

Lee, S., & Jeong, M. (2012). Effects of e-servicescape on consumers' flow experiences. *Journal of Hospitality and Tourism Technology, 3*(1), 47–59.

Loureiro, S. M. C., Guerreiro, J., & Ali, F. (2020). 20 years of research on virtual reality and augmented reality in tourism context: A text-mining approach. *Tourism Management, 77*, 104028.

Mackenzie, S. B., Lutz, R. J., & Belch, G. E. (1986). The role of attitude toward the ad as a mediator of advertising effectiveness: A test of competing explanations. *Journal of Marketing Research*, *23*, 130-143.

Mccarthy, E. J., & Perrault, W. D. (1990). *Basic marketing: A managerial approach*. U.S.A.: Irwin.

McFee, A., Mayrhofer, T., Baràtovà, A., Neuhofer, B., Rainoldi, M., & Egger, R. (2019). The effects of virtual reality on destination image formation. In *Information and communication technologies in tourism 2019* (pp. 107-119). Springer, Cham.

Merli, R., Preziosi, M., Acampora, A., & Ali, F. (2018). Why should hotels go green? Insights from guests experience in green hotels. *International Journal of Hospitality Management, 81*, 169–179.

Molina, A., & Esteban, A. (2006). Tourism brochures. *Annals of Tourism Research, 33*(4), 1036–1056.

Nitzl, C., Roldán, J. L., & Cepeda, C. G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems, 116*(9), 1849-1864.

Nunkoo, R., & Ramkissoon, H. (2010). Gendered theory of planned behaviour and residents' support for tourism. *Current Issues in Tourism*, *13*(6), 525-540.

Oliver, R. L. (1997). *Satisfaction: A behavioural perspective on the consumer*. New York: McGraw-Hill.

Oppenheim, C. (1993). Virtual reality and the virtual library. *Information services and use, 13*(3), 215-27.

Özgüneş, R., & Bozok, D. (2017). Turizm sektörünün sanal rakibi (mi?): Arttırılmış gerçeklik. *Uluslararası Türk Dünyası Turizm Araştırmaları Dergisi, 2*(2), 146-160.

Pantano, E., & Corvello, V. (2014). Tourists' acceptance of advanced technology-based innovations for promoting arts and culture. *International Journal of Technology Management*, *64*(1), 3-16.

Pantelidis, C., Tom Diek, M. C., Jung, T., & Miller, A. (2018). Exploring tourist experiences of virtual reality in a rural destination: a place attachment theory perspective. *e-Review of Tourism Research.*

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *The Journal of Marketing*, *49*(4), 41-50.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879-891.

Quintal, V. A., Lee, J. A., & Soutar, G. N. (2010). Risk, uncertainty and the theory of planned behavior: A tourism example. *Tourism Management*, *31*(6), 797-805.

Rainisto, S. K. (2003). *Success factors of place marketing: a study of place marketing practices in Northern Europe and The United States.* Unpublished Doctoral Dissertation, Helsinki University of Technology, Helsinki, Finland.

Rajaratnam, S. D., Munikrishnan, U. T., Sharif, S. P., & Nair, V. (2014). Service quality and previous experience as a moderator in determining tourists' satisfaction with rural tourism destinations in Malaysia: A partial least squares approach. *Procedia-Social and Behavioral Sciences*, *144*, 203-211.

Rheingold, H. (1992). Virtual reality: The revolutionary technology of computer-generated artificial worlds and how it promises to transform society. New York: Simon & Schuster.

Rizzo, A. S., & Kim, G. J. (2005). A SWOT analysis of the field of virtual reality rehabilitation and therapy. *Presence: Teleoperators & Virtual Environments, 14*(2), 119-146.

Rodríguez-Victoria, O. E., Puig, F., & González-Loureiro, M. (2017) Clustering, innovation and hotel competitiveness: Evidence from the Colombia destination. *International Journal of Contemporary Hospitality Management, 29*(11), 2785-2806.

Sarı, Y., & Kozak, M. (2005). Turizm pazarlamasına internetin etkisi: Destinasyon web siteleri için bir model önerisi. *Akdeniz İ.İ.B.F. Dergisi*, *9*, 248-271.

Şentürk, G. (2014). *Broşür tasarımı ve basımı özelliklerinin incelenmesi*. Unpublished master's thesis, İstanbul Arel University, İstanbul, Turkey.

Singh, N., & Lee, M. J., (2009). Convergence and congruency of pictorial destination images in dmos' websites and brochures. *Journal of Hospitality Marketing and Management, 18*(8), 845-858.

Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues & Research in Advertising*, *26*(2), 53-66.

Stone, R. J. (1991). Virtual reality and cyberspace: from science fiction to science fact. *Information Services & Use, 11*(5-6), 283-300.

Suh, K. S., & Lee, Y. E. (2005). The effects of virtual reality on consumer learning: an empirical investigation. *Mis Quarterly, 29*(4), 673-697.

Sweeney, J. C., & Wyber, F. (2002). The role of cognitions and emotions in the music-approach-avoidance behavior relationship. *Journal of Services Marketing, 16*(1), 51-69.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn and Bacon.

Tek, Ö. B. (1999), *Pazarlama ilkeleri*. İstanbul: Beta Basim A.S.

TUIK (2020a). Income and Living Conditions Survey, 2019. Retrieved March, 10, 2021, from https://data.tuik.gov.tr/Bulten/Index?p=Gelir-ve-Yasam-Kosullari-Arastirmasi-Bolgesel-Sonuclari-2019-33821

TUIK (2020b). Retrieved March 10, 2021, from https://data.tuik.gov.tr/Kategori/GetKategori?p=egitim-kultur-spor-ve-turizm-105&dil=1

Tussyadiah, I. P., Wang, D., Jung, T. H., & tom Dieck, M. C. (2018). Virtual reality, presence, and attitude change: Empirical evidence from tourism. *Tourism Management*, *66*, 140-154.

Ülker-Demirel, E., & Çiftçi, G. (2020). A systematic literature review of the theory of planned behavior in tourism, leisure and hospitality management research. *Journal of Hospitality and Tourism Management*, *43*, 209-219.

UNWTO (n.d.). Country Profile – Inbound Tourism. Retrieved March 10, 2021, from https://www.unwto.org/country-profile-inbound-tourism

Vogt, C., & D. Fesenmaier (1998). Expanding the functional information search model. *Annals of Tourism Research, 25*, 551–578.

Walker, D., & Dubitsky T. M. (1994). Why liking matters. *Journal of Advertising Research, 34*(3), 9–18.

Wan, C. S., Tsaur, S. H., Chiu, Y. L., & Chiou, W. B. (2007). Is the advertising effect of virtual experience always better or contingent on different travel destinations?. *Information Technology & Tourism*, *9*(1), 45-54.

Wei, W., Qi, R., & Zhang, L. (2019). Effects of virtual reality on theme park visitors' experience and behaviors: A presence perspective. *Tourism Management, 71*, 282-293.

Wirth, W., Hartmann, T., Beocking, S., Vorderer, P., Klimmt, C. Schramm, H. & Jeancke, P. (2007). A process model of the formation of spatialpresence experiences. *Media Psychology, 9*, 493-525.

Yağcı, M. I., Biswas, A., & Dutta, S. (2009). Effects of comparative advertising format on consumer responses: The moderating effects of brand image and attribute relevance. *Journal of Business Research, 62*(8), 768-774.

Yao, C., & Huang, P. (2017). Effects of placement marketing on product attitude and purchase intention in traditional industry. *Eurasia Journal of Mathematics, Science and Technology Education, 13*(12), 8305-8311.

Yung, R., & Khoo-Lattimore, C. (2019). New realities: a systematic literature review on virtual reality and augmented reality in tourism research. *Current Issues in Tourism, 22*(17), 2056-2081.

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing, 60*(2), 31-46.

Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*(2), 197-206.

Zhou, Z., (1997). Destination marketing: Measuring the effectiveness of brochures. *Journal of Travel and Tourism Marketing, 6*(3-4), 143-158.

https://amsterdam.org/en/facts-and-figures.php