Understanding the Role of Perceived Interactivity on Behavioral Intentions in Tourism Marketing

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Abstract

The purpose of the study is to determine the effect of perceived Interactivity of immersive 360-degree videos of a tourist destination in terms of user control on travel intentions to visit the destination being promoted. The data was collected from 77 individuals who have a keen interest in Pakistan's tourism sector and are in the age group of 18 to 35, with a questionnaire's help, using a Likert scale. The analysis is conducted through SPSS by running regression analysis to determine the relationship between both variables. The results indicate a significant positive relationship between perceive Interactivity and behavioral intentions to visit tourist destinations.

Keywords: Perceived Interactivity, Behavioral Intentions, Tourism Marketing

1.   Introduction

When we talk about new and innovative media, such as virtual reality, augmented reality of 360-degree videos, one word that is usually used as a synonym is "Interactivity." It is a feature that is highly desirable from consumer's perspective when they talk about new technology. The control of the nay new medium's interactivity offers the consumer to feel more independent and, hence, results in a better experience. This is the reason that advertisers and people who research mediums of advertising and promotion have taken a keen interest in

Interactivity. Despite this overwhelming interest interactivity, the scope of interaction is mostly defined narrowly by researchers or sometimes undefined. Schults and Society (2000) Interactivity is defined by McMillan (2005) in a broader context by stating that perceive Interactivity consists of three dimensions I-e Time, Communication and Control. While Lee (2005) explain Interactivity in terms of four components: connectedness, responsiveness, user control and personalization. This study is focused on the User Control component of Perceive Interactivity, which is defined by Lee (2005) as "User control refers to the user's ability to control the information display and content." In terms of this study, it is defined as "Perceive Interactivity if the ability of the user to control the view angle of the display while experiencing an immersive 360-degree video of a tourist destination.

The tourism sector's growth calls for new and innovative ways to attract customers towards each country and tourist destination. The importance of E-marketing is continuously growing, specifically in the tourism sector (Hvass & Munar, 2012). Similarly, the marketing landscape is changing, new technologies are reshaping the marketing industry, and new possibilities are being created for all sectors. These unique marketing opportunities and solutions will generate more revenue for the business and create a more enjoyable and entertaining platform for customers through equally convenient and pleasant mediums. Technology can play a significant role in the tourism industry. Success in the tourism sector is not dependent on the infusion of technology in tourism. With the increase of globalization and advancement, a potential traveler can receive any information anywhere at any time with the maximum level of convenience. Integration of Information and Communication Technology (ICT) in tourism has become essential for tourism success (Bethapudi & business, 2013)

Imagine you are sitting in the comfort of your home and enjoying a 360-degree view of a breathtaking landscape of a tourist destination, the control that VR headset offers you in term of the 360-degree view gives you the ability to interact in terms of looking and experience in whatever direction that you choose. The purpose of this study is to determine the effect of Perceived Interactivity in term so of user control offered by immersive 360-degree videos on intentions of users to visit that tourist destination, when experienced through the head, mounted displays, or VR Headsets.

2. Literature Review

2.1 Perceived Interactivity

One of the key areas of research in advertising and promotional aspects is that of consumers' perception. Therefore, researchers have started adopting perceptual measures, and more recently in terms of technology, such as attitude or intentions towards websites (Chen & Wells, 1999). Lee, (2000) proposed that Interactivity should not be analyzed by measuring processes or based on features; instead, the focus should be on the experience or the user's perception. In their study, Reeves and Nass (1996) concluded that perception is way more if objectively defined.

On the other hand, the role of Interactivity, especially in terms of technology, advertising, information science and marketing research, has always been of interest to researchers and practitioners for the past 25 years and has been discussed extensively. According to Day (1998), Interactivity uses information or data from the user rather than about the user, thus focusing on involving the consumer. According to Jensen's (1998) definition, Interactivity was focused on the user control component and mentioned the user ability to influence the content or form of the communication medium potentially; the definition is also followed by (Lombard & Snyder-Duch, 2001). Hwang and McMillan (2002) explained perceived Interactivity as user activity, sense of presence and user control in terms of a website. Wu (1999) defined perceived Interactivity as a combination of two components; one is responsiveness and navigation through the content. Similarly, Coyle and Thorson (2001) explained that perceived Interactivity focused on the user's ability to manipulate the content in multiple ways.

McMillan, (2005) defines Interactivity in a broader context by stating that perceive Interactivity consists of three dimensions I-e Time, Communication and Control. At the same time, Lee (2005) explain Interactivity in terms of four components: connectedness, responsiveness, user control and personalization. This study is focused on the User Control component of Perceived Interactivity, which is defined by Lee (2005) as "User control refers to the user's ability to control the information display and content." In terms of this study, it is defined as "Perceived Interactivity is the user's ability to control the view angle of the display while experiencing an immersive 360-degree video of a tourist destination.

2.2   *Immersive 360 Degree Videos*

An immersive experience of 360-degree videos offers vast potential to provide more captivating and attractive experiential solutions for marketers, especially in the tourism industry when experienced through VR headsets. Such videos' popularity increased many folds after introducing cheap headsets in the market that offers a wide Field of View (FoV) and better display in multi directions. These headsets enable people to choose a FOV of their choice, which provides real-life experience. As a viewer, you are not bound to directors cut and angles; you are free to look where you want, giving you more control and freedom (Argyriou, Economou, Bouki, & Computing, 2020). Staats, Gatersleben and Hartig, (1997) examine the experience that virtual reality can offer, which is much more realistic with 360-degree video. It can be used as a virtual tour of a place or a destination. Similarly, another study mentioned that 360-degree videos could ensure maximum viewership due to the elements of surprise and joy (Teixeira, 2012).

Moreover, S (2012) studied the development in promoting a tourist destination and believed that 360-degree videos are much economical than the virtual or 3D representation of a goal. The panoramic experience of 360-degree videos engages the viewer in a better way. Cho, Wang, Fesenmaier and Marketing (2002) mentioned that 360-degree videos could enhance a tourist destination through better experiences. O'Neill (2016) stated that due to more user empowerment and engagement, 360-degree videos become a priority for marketers because they can provide a more vivid image of the location and give them a pre-experience.

2.3   *Head-Mounted Displays*

Past researches suggested that the type of device used to influence audience engagement to a great deal. For example, to receive a better immersive experience, you need a Head-mounted Display (HMD) with a stereoscopic function; this will more effectively engage the audience (Fonseca & Kraus, 2016; Tse et al., 2017; Ulenius, 2017). Head-mounted display such as virtual headsets also offers better control to the audience in terms of natural interaction. The viewer is not bound to the camera's directions angle but free to look around in any direction as per his wish by turning his head in the required direction (Ulenius, 2017)

Studies conducted in the past concluded that Perceived Interactivity has a significant direct relationship with behavioral intentions, such as

the study (Schlosser, 2003) related to purchasing intention in the initial phase an Interactivity showed a positive relationship. Simultaneously, understanding online Interactivity and revisit intention and willingness to buy (Fang, 2012). The interactivity role was studied in future purchase intention by (Lu, Kim, Dou, & Kumar, 2014) also come up with the same findings. (Jeon, Jang, Barrett, & Tourism, 2017) Their study related to website interactivity and purchase intentions predicted that the Perceived Interactivity has a significant effect on intentions.

2.4   *Behavioral Intentions*

Behavioral intentions are defined as" the extent to which an individual has made concise proper plans to act upon a specific behavior to be performed in future" (Warshaw & Davis, 1985). The behavioral intention in terms of tourism is known as travel intentions, and it is defined as a traveling activity or holiday which a person is planning to go to. The purpose is considered the immediate predecessor of behaviors (Zhang, Prybutok, & Koh, 2006). The proxy usage of behavioral intention for predicting actual usage has produced positive and better results so far. In the recent past, the researches on acceptance of new technologies did not use the actual usage but behavioral intentions only; the example of these studies include online banking systems acceptance and also the online retailing business (Ramayah, Jantan, Mohd Noor, Razak, & Koay, 2003; Y. S. Wang, Wang, Lin, & Tang, 2003), In the context of mentioned study the Behavioral Intentions is defined as the intentions of a user to use of immersive 360-degree videos. In this study's context, Behavioral Intentions are defined as the travel intentions to visit a destination presented through immersive 360-degree video.

2.5   **Perceived Interactivity and Behavioral Intentions**

Studies conducted in the past concluded that Perceived Interactivity has a significant direct relationship with behavioral intentions. The study (Schlosser, 2003) related to purchasing intention in the initial phase an Interactivity showed a positive relationship Simultaneously me, understanding online Interactivity and revisit intention along with a willingness to purchase (Fang, 2012). The interactivity role was studied in future purchase intention (Lu, Kim, Dou, & Kumar, 2014)(Jeon, et al., 2017). Their study related to website interactivity and purchase intentions predicted that perceived Interactivity has a significant effect on intentions.

3. Methodology

3.1 Sample and Data Collection

For this study's purposected from the sample that consisted of both male and female genders between 18-35, interested in technology and the Non-probability sampling is used through convenience sampling to collect data. Data is collected with the help of a questionnaire with three parts. The first section consisted of demographic information. The second section consisted of Perceived Interactivity, and the final section consisted of Behavioral intentions.

Data is collected with the help of an activity-based approach, where respondents were first shown an immersive 360-degree video of a tourist destination; "The Zion Narrows by Specterras" immersive experience was used because of its ability to offer better Interactivity, using "Samsung Gear VR headset; Powered by Oculus, Model SM-R324". After watching the video, a questionnaire was handed over to respondents to respond. A total of 77 questionnaires was received.

This study adapted the scale of Perceived Interactivity of user control (D. Wang, Wang, Zheng, Tao, & Zheng, 2020). Four items were adapted that consisted of the following question i). I think I have a lot of control over the experience of watching immersive 360-degree of a tourist destination ii). When I use immersive 360-degrees of a tourist destination, I am free to choose what I want to see iii). It's easy for me to interact with immersive 360-degree tourist destination iv). I can learn to use immersive 360-degrees of a tourist destination on head-mounted devices quickly.

For Behavioral intention, Kim and Jung's 2019 study Exploring consumer behavior in virtual reality tourism using an extended stimulus-organism-response model questionnaire is adapted and modified. (Kim, Lee, & Jung, 2020) with four items scale. Both the constructs were measure using five points Likert scale.

4. Data Analysis

Product Moment Correlation and regression were used with SPSS to forecast how far Y's value (dependent variable: behavioral intention) if X (independent variable: perceived Interactivity) is changed.

4.1 Correlation

Product Moment Correlation analysis is used to closeness the relationship between two variables and determine its direction. This study SPSS to calculate Pearson product-moment correlation analysis

because it uses interval scale data, as the scale of this research is also interval (Likert). Pearson product-moment correlation uses the criterion that the correlation value (r) ranges from 1 to -1; The strength of the relationship is stronger when the value gets closer to 1 or -1. In contrast, the weakness of the relationship is depicted when the value is close to 0. The same directional relationship is depicted by positive values (X rises then Y rises). A contrasting relationship is observed when there is a negative value (X increases, then Y drops). The results show that there is a significant positive relationship between Behavioral intentions and Perceived Interactivity. Behavioral Intentions is positively related to Perceived Interactivity (r=0.345, p<0.001),

Table 1.1: Correlation Analysis

		BI	PI
BI	Pearson Correlation	1	.345[**]
	Sig. (1-tailed)		.001
	N	77	77
PI	Pearson Correlation	.345[**]	1
	Sig. (1-tailed)	.001	
	N	77	77
**. Correlation is significant at the 0.01 level (1-tailed).			

4.2 Regression Analysis

This study used regression to forecast how far Y's value (dependent variable: behavioral intention) if X (independent variable: perceived Interactivity) is changed. Sugiyono (2012) Regression analysis is used to make predictions about how changes in the dependent variable's value when rising independent variables are increased or decreased in value. The study shows a positive and significant effect of Perceived Interactivity on Behavioral Intentions.

Table 1.2: Regression Analysis

Model		Coefficients (Un standardized)		Coefficients (Standardized)			Sig.
		B	Std. Error	Beta	T		
1	(Constant)	5.761	.694		8.304		.000
	PI	.407	.128	.345	3.187		.002
a. Dependent Variable: BI							

Regression results are given in the table below. (B = 0.345, P= .002) as shown in table.2.

5.   Discussion and Conclusion

The study results showed that the Perceived Interactivity of Immersive 360-degree video of a tourist destination in terms of user control helps form consumers' intentions to visit the presented tourist destination. This relationship of Perceived Interactivity with behavioral intentions has been repeatedly studied by previous research and these studies came up with a significant positive relationship between the variables. So the present study results are in line with previous studies and provided support to them (Jeon, et al., 2017). Their research related to website interactivity and purchase intentions predicted that the Perceived Interactivity has a significant effect on intentions. A study of (Schlosser, 2003) related to purchasing intention in the initial phase an Interactivity showed a positive relationship. In contrast, understanding online Interactivity and revisit intention along with a willingness to purchase (Fang, 2012). The interactivity role was studied in the future purchase intention by (Lu, Kim, Dou, & Kumar, 2014) also come up with the same findings.

Recommendations

This study explored how user control's the Perceived Interactivity of immersive 360-degree videos of a tourist destination as an independent variable can affect behavioral intentions to visit that destination. The data was collected from respondents using an activity-based approach with the help of a questionnaire. The data received was analyzed with the help of SPSS by using correlation and regression analysis. The results revealed that the Perceived Interactivity of immersive 360-

degree videos of tourist destinations in user control has a significantly positive relationship with Behavioral intentions. Although the interactive 360-degree video is still very new, future researchers can study the interaction in term of augmented reality and interaction with elements within the video, like a mountain, hotel, monument, or river within that video, clicking the desired item may provide more information thus increasing the aspects interactivity. Also, the use of augmented reality in terms of navigation and mapping services may be studied.

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