Chapter 4
The Future of Digital Tourism Alternatives in Virtual Reality

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ABSTRACT

In this study, a review of the future of VR technologies for digital tourism alternatives will be presented. The general purpose of the research is to contribute to VR technologies, which are developing and integrating with new systems with each passing day from the point of view of providing a general perspective in tourism. VR application information to deepen understanding of the scope of the digital future of tourism alternatives will be presented in a systematic framework. In general, VR technologies express the behavioral experiences of individuals in virtual environments. When tourism and VR technologies are combined, the composition of the product in which these virtual experiences are directed towards a purpose emerges. Every new development that occurs from a technological point of VR technology will make it possible to be used in every field of tourism. The contribution of this research is to provide suggestions for future studies as well as practical implications for the tourism industry regarding VR systems, which are among the digital tourism alternatives.

INTRODUCTION

Humanity has important power like as curiosity and through this concept has gone to the path of overcoming all works that it could not be able to do biologically and physiologically with inventions. This process continues with humanity's material processing and development efforts have enabled it to reach the technological dimension. Humanity, which has managed to develop a technological product for every difficult task throughout history transitioned to the modern life process where life became easier with the industrial developments and technological progresess more appropriate over time. Social developments

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affected by industrial developments and industrial developments also affected by social developments can be regarded as a paradoxical process. At this point development of humanity defining that using Society 1.0–hunter-gatherer, Society 2.0–agriculture, Society 3.0–industrial, Society 4.0–knowledge, Society 5.0–super smart society reflections of these concepts. On the other hand, it has been possible to observe these developments that Industry 1.0–steam power, Industry 2.0–electricity, Industry 3.0–mass production, Industry 4.0–digital technology and Industry 5.0–robotic manufacturing. The social and industrial developments experienced also have reflections on the tourism sector. Positive developments in the tourism sector, where innovative approaches have been experienced in meeting tourist demands in recent years, have left it to the process of overcoming the difficulties posed by the pandemic process, which continues to be effective today. While the issue of sustainability of tourism activities has gained more importance with the effect of the current pandemic, advances in technology have contributed to the development of concepts such as tourism 4.0, smart tourism and digital tourism. In this process, while the new generation advantages created by technological developments reveal important opportunities for tourism which has also made it important to introduce digital concepts such as virtual reality to the sector. This situation shows a two-way development, firstly it gains a whole new dimension in terms of tourist experiences and secondly it opens up brand new tourism investment opportunities for tourism businesses that can offer new experiences to tourists. Tourism evolves from its traditional structure to reality technologies as a result of social and industrial developments. Virtual Reality (VR) is an unreal environment that allows participants to have different experiences in simulation areas. Developing VR technologies are highly demanded in tourism. In general, VR technologies express the behavioral experiences of individuals in virtual environments. VR technology, which has used to promote travel products in first place, which is a marketing product, is now on the agenda in terms of new generation digital tourism alternatives. In this study, a review of the future of VR technologies for digital tourism alternatives and VR application information to deepen understanding of the scope of the digital future of tourism alternatives will be presented in a systematic framework.

VIRTUAL REALITY

History of Virtual Reality

The first and most important development started with the invention of the Stereoscope mechanism, which was developed by Wheatstone in 1838 and enables two-dimensional photographs to be perceived as three-dimensional in virtual reality technology. This process that formed the beginning of the 3D film industry continued with the development of Kinematoscope by Coleman Sellers in 1861 and Mutoscope devices by Herman Casler in 1894 (Brown, 2003). Then the US army used for pilot training called Trainer device that was invented by Link in 1929 in the First and Second World Wars and was the first example of a flight simulator in military field. These developments gained a new dimension in 1948 when Wiener stated that the concept of Cybernetics "human-machine interaction" would positively affect the quality of social life. Then Heilig invented Sensorama ifor the theater cabin, which appeals to all the senses and offers a realistic experience to the user in 1957 and the first head-mounted display (HMD) Telesphere Mask in 1960 (Angelo, 2000). Comeau and Bryan, two engineers, developed prototype of a modern-day HMD in 1961. Sutherland developed the Sketchpad software program, which transfers graphichs drawn to the computer environment in 1963, after that together with his two students they invented