Chapter 80

Augmented Reality as an Emerging Application in Tourism Marketing Education

Azizul Hassan
Cardiff Metropolitan University, UK

Timothy Jung
Manchester Metropolitan University, UK

ABSTRACT

Augmented Reality (AR) as an advanced format of Virtual Reality (VR) becomes widely available in numerous appliances, mainly in mobile devices like Smartphones or wearable devices. As the prospective benefits of this technology are said to be immense, tourism marketing education is believed to experience a comprehensive application of AR in coming years. At present, AR technologies are in use in many academic disciplines including medicine, geography, information technology, computer aided entertainment and many more. Out of all of the recently developed technological advancements, those can be termed as 'Innovations', augmented reality can be considered as a key innovation. As coined, due to easier operational capacities, AR is becoming more popular and better fitting in tourism marketing education systems. This chapter outlines the use of AR, termed as an 'Innovation' as per the 'Diffusion of Innovations' theory of Rogers (1962), to meet tourism marketing education demands. The chapter critically examines relevant cross-country cases to support the arguments made above.

INTRODUCTION

This chapter discusses diverse features and potentials of augmented reality in tourism marketing education and suggests its inclusion in the academic syllabuses to be studied as a key module. Augmented reality (AR), an extension of virtual reality, is an emerging technology that can provide experiences in which real world places and activities are enhanced with computer-generated content, seamlessly mixing and overlapping human perception with two dimensional (2D) and three dimensional (3D) objects (Yuen, Yaoyuneyong, & Johnson, 2011). AR has emerged as an unprecedented use of technology in a number

of fields including architecture, construction, military, medical, entertainment, advertising, travel, and marketing. Global brands from different sectors and industries have managed to use AR technology effectively and efficiently, garnering positive responses and support from consumers (Kaufman & Horton, 2015). As a result AR is having an impact on the everyday lives of consumers (Kipper & Rampolla, 2015).

The use of AR in the tourism industry is emerging. As an example, in 2008, Wikitude, a mobile AR software travel guide, was offered as freeware which displays information about the users' surroundings in a mobile camera view, including image recognition and 3D modeling. Tourists traveling in unfamiliar environments naturally require solid sources of data and information; AR applications can meet the demand of personalized, pertinent and rationalized information at a dependable level (Olsson & Väänänen-Vainio-Mattila, 2011). Today, AR applications are being created by tourism organizations all over the world for educational and marketing purposes. Tourism marketing professionals are responsible for advertising and publicizing a variety of goods and services, ranging from tourist sites, lodging establishments, and special events. Positions related to tourism marketing include, but are not limited to, in-house resort marketing representative, tourism specialist for a marketing firm, head of marketing for a resort or cruise line. Students studying to work in the tourism industry must have knowledge and skills in the use of AR in tourism marketing related jobs in order to be competitive in the employment arena.

The purpose of this chapter is to provide an overview of AR applications and platforms, discuss the use of AR applications and platforms within tourism marketing, and to make a case for including AR as a topic of study in institutions of higher education which offer bachelor's and master's degrees in tourism marketing and related programs. Specifically, this chapter is designed to outline augmented reality and its applications in tourism marketing education mainly in three aspects: theoretical, practical, and cross country examples.

BACKGROUND

AR has the potential to incorporate all human senses (sight, sound, taste, smell, touch) into a technological experience (Abernathy & Clark, 2007). AR applications are accelerated mainly by the latest developments in mobile computing, computer graphics, wire-less and sensor technologies. These advances influence and enhance human experiences through providing real time information displays and reviews (Suh, Shin, Woo, Dow, & MacIntyre, 2011). Gartner (2014) expects that, on the basis of continual technological advancements, the general public will be highly accepting the AR technologies. Still, the use of AR application as a tourism marketing tool is developing and may seem futuristic to some individuals (Shen, Ong, & Nee, 2011; Seo, Kim, & Park, 2011). However, AR applications can appear as marketing tools where these are still subject of exploration, where, touristic demand for information source is common (Yovcheva, Buhalis, & Gatzidis, 2012).

AR technology can work on grounds like the Global Positioning System (GPS) and on mobile devices with capacities to add virtual features and to relate them with reality (Azuma, 1997). AR as a medium of displaying requires intensive use of hardware or electronic devices such as camera, display monitors and computing gadgets. The introduction of handheld electronic items like the Smartphone or the smaller version of wearable computers has extended the realms of AR technology (Buchholz, 2014). On the other side, gaming consoles such as the Nintendo DS or similar also are mostly equipped with augmented reality technologies today (Breeze, 2014). The strengths of AR lie in its technological simplicity and capacities to perform as an educational tool.

Related Content

The Effect of Experience-Based Tangible User Interface on Cognitive Load in Design Education
Zahid Islam (2020). *International Journal of Virtual and Augmented Reality (pp. 1-13).*
www.irma-international.org/article/the-effect-of-experience-based-tangible-user-interface-on-cognitive-load-in-design-education/283062

Techniques on Multiplatform Movement and Interaction Systems in a Virtual Reality Context for Games
Konstantinos Ntokos (2019). *Cases on Immersive Virtual Reality Techniques (pp. 199-216).*
www.irma-international.org/chapter/techniques-on-multiplatform-movement-and-interaction-systems-in-a-virtual-reality-context-for-games/225129

The Ape that Used E-Mail: An Evolutionary Perspective on E-Communication Behavior
Ned Kockand Vanessa Garza (2009). *Virtual Team Leadership and Collaborative Engineering Advancements: Contemporary Issues and Implications (pp. 242-254).*
www.irma-international.org/chapter/ape-used-mail/30887

Motion Cueing Algorithms: A Review: Algorithms, Evaluation and Tuning
Sergio Casas, Ricardo Olandaand Nilanjan Dey (2017). *International Journal of Virtual and Augmented Reality (pp. 90-106).*
www.irma-international.org/article/motion-cueing-algorithms-a-review/169937

Cubios Transreality Puzzle as a Mixed Reality Object
Ilya V. Osipov (2017). *International Journal of Virtual and Augmented Reality (pp. 1-17).*
www.irma-international.org/article/cubios-transreality-puzzle-as-a-mixed-reality-object/188478