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A PRELIMINARY INVESTIGATION ON THE IMPLICATIONS OF 3D VIRTUAL WORLDS IN DESTINATION MARKETING

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ABSTRACT

Second life has been used by the travel and tourism industry as a collaborative and commercial tool for communicating with travelers as well as tourism enterprises in the areas of destination marketing (e.g. Tourism Ireland), business management (i.e. Starwood Hotels; Crowne Plaza; STA travel agents). However, few studies have applied theory to understand the significance of 3D virtual worlds to tourism destinations. Thus, the intent of the present study is to test the applicability the Self-Determination Theory in understanding the use of Second Life in destination marketing and its association to develop consideration and awareness for potential customers in their destination choices

Keywords: *3D virtual words, Second Life, Destination Choices.*

INTRODUCTION

As Hemp's (2006) article of "Avatar Based Marketing" in the Harvard Business Review points out online 3D virtual worlds such as Second Life are "unexplored marketing territories" and "conceiving of avatars and other online personae as a new set of potential customers, one that can be analyzed and segmented, provides a useful way to think about new marketing opportunities" (p.57). Recognizing the opportunities for conducting business, companies have begun to explore the applications of technology in 3D virtual worlds in different realms for example marketing, branding, education, entertainment, and tourism (Park et al., 2008; Hay, 2008). Such companies include IBM, Toyota, Dell, Best Buy, Adidas, Cisco systems, Coca-Cola, and Sony. Second life has also been used by the travel and tourism industry as a collaborative and commercial tool for communicating with travelers as well as tourism enterprises in the areas of destination marketing (e.g. Tourism Ireland; St. Louis Convention & Visitors Commission), business management (i.e. Starwood Hotels; Crowne Plaza; STA travel agents). However, few studies have applied formal theory to understand the significance of virtual worlds to tourism destinations. Thus, the intent of the present study is to test the applicability the Self-Determination Theory in understanding the use of Second Life in destination marketing and its association to develop consideration and awareness for potential customers in their destination choice.

LITERATURE REVIEW

Self-Determination Theory (SDT; Ryan & Deci, 1985 & 2000) has been applied as a theoretical framework for examining human motivational behavior. Recently, a small number of studies have validated the framework of SDT in the context of video gaming, establishing that the satisfaction of psychological needs leads to sustained engagement with games and subsequently how those qualities can facilitate intrinsic motivation and behavioral intentions (Ryan, Rigby, and Przybylski, 2006; Przybylski, Ryan & Rigby; 2009). These preliminary applications of the theoretical framework of SDT suggest that the quality of need satisfactions for a virtual context can have implications for explaining entertainment oriented virtual worlds

such as Second Life. Thus, the purpose of this study is to investigate how self-determination theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2000) applies to and accounts for people's needs satisfactions in a 3D virtual tourism environment context. Specifically, this study examines the hypothesis that the 3D virtual tourism environment of Second Life is motivating to the extent that virtual tourists experience autonomy, competence, and relatedness. Also, this study examines how the satisfaction of psychological needs relates to intrinsic motivations and behavioral intentions to develop awareness and consideration in trip decision-making process.

METHODOLOGY

Participants are recruited from an introductory PRTM class and a tourism marketing class in the Department of Park, Recreation and Tourism Management at a University in southeast region of the US. Students then signed up for three one-hour class sessions to take part in this study of virtual tourism in Second Life. The first two sessions focused on orientation and training and the third one involved taking part in the treasure hunt activity at a 3D tourism destination, Second Life Maasai Mara. Participants are introduced to the virtual environment of Second Life during the first hour-long orientation period. During the initial training period, an orientation handbook is provided so that these participants could practice the basics of navigation and communication skills. A quantitative research method was used to examine the relationship between the satisfaction of psychological needs and behavioral intentions to take a trip. Two self-administered web questionnaires were used to collect the data used to test the research questions, both involving closed-ended questions about participant's virtual tourist experience in a 3D virtual tourism environment. To measure the psychological needs of competence, autonomy, and relatedness, this study modified Ryan et al.'s (2006) scale of Player Experience Need Satisfaction (PENS). The measurements of competence, autonomy, and relatedness were assessed on a 7-point Likert scale for each item (1= strongly disagree, 7= strongly agree).

RESULTS

To examine the internal consistency of measurements used in this study, a reliability test was performed. The result of reliability test showed that Cronbach's alpha coefficients ranging from 0.85 to 0.96, indicating that all eight variables had an adequate reliability (Nunnally, 1978). A multivariate regression model was performed to examine the relationship among psychological needs of competence, autonomy and relatedness and intrinsic motivation while experiencing Second Life Masai Mara. The result of the regression showed that the adjusted R² of the model on intrinsic motivations is 0.66. The model of competence, autonomy and relatedness on the effect of intrinsic motivation is significant, $F=122.99$, $P<0.001$. The standardized regression coefficient for competence is 0.170 ($\beta= 0.170$, $p<0.01$), revealing a positive relationship between competence and intrinsic motivation. The standardized coefficient ($\beta= 0.59$) for autonomy was significant and positive ($P<0.01$), revealing positive association between autonomy and intrinsic motivation. The standardized coefficients ($\beta= 0.32$) for the effect of relatedness on intrinsic motivation was significant and positive ($P<0.01$), indicating relatedness positively related to intrinsic motivation. In testing the association between psychological needs of competence, autonomy, relatedness and behavioral intention, the result of the regression model was significant, $P<0.01$, $F(3, 177) = 72.77$ and explained 55.2% variance of the dependent variable of enjoyment, adjusted $R^2=0.545$. The standardized coefficient ($\beta= 0.13$) for competence was non-significant ($p=0.613$). The standardized coefficient ($\beta= 0.34$) for autonomy was significant and positive ($P<0.01$), revealing positive relationship between autonomy and behavioral intention. It has a unique effect size of 0.114 ($Sr^2=0.114$) indicating that autonomy explained 11.4 % variance of the behavioral intention. The standardized coefficients ($\beta= 0.37$) for relatedness was significant and positive ($P<0.01$), indicating relatedness positively associated with behavioral intention. It has a unique effect size of 0.106 ($Sr^2=0.106$) indicating that relatedness explained 10.6 % variance of the dependent variable.

DISCUSSIONS

Second Life presents a relatively new marketing platform that offer an opportunity to develop interactive experiences and provide various hand-on activities within virtual tourism destinations for retaining and attracting current consumer or potential customers. As the applications and opportunities of Second Life in marketing continue to rapidly emerge, the understanding of the potential and influence of Second Life within context of travel and tourism still needs to be identified and fully discovered. This study represents an empirical application of self-determination theory that is theoretical and practical framework to examine how 3D virtual tourism content makes contributions to psychological need satisfactions for competence, autonomy and relatedness resulting in increasing intrinsic motivations and behavioral intentions to develop awareness and consideration in trip decision-making process. Results of the study revealed consistently sturdy relations between psychological need satisfaction and intrinsic motivation in a virtual tourism environment, supporting the general principles of the Self-Determination Theory (Deci & Ryan, 1985).

IMPLICATIONS

The results indicated that Second Life virtual tourism environment offers opportunities for potential tourists to do activities for their interests, provides chance to acquire new skills or abilities for feeling of competence, and presence likelihood to form fulfilling relationships that had a influence on travelers' intentions to visit an actual destination. From the standpoint of tourism practitioner, the findings of this study can be used as a valuable input to the development a productive and interactive a 3D tourism site and to design marketing strategies for enhancing engaging and interactive virtual tourist experiences. Tourism marketers can fully utilize interactive communications and direct feedback in the setting of the virtual tourism destination to help potential visitors experience totally engagement and increase active participation.

LIMITATION

It is important to note that a number of limitations subjects to present study. First, the majority of our participants are between 18-24 years old and from USA and the generalizability may become an issue. It is suggested that future study should devote to entail diverse population for validating the theoretical framework. The inclusion of diverse populations in different culture may be timely. Additionally, the exploratory nature of this study entailed small samples, and future study should gather larger sample to validate the measurements by employing structure equation modeling.

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