

# Forming Affect, Behavior, and Cognition with Gamification: The Case of an Austrian Tourism Advergame

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## 1 Introduction

Information and Communication Technology (ICT) has enabled the development of gamification, i.e., “the use of game design elements in nongame contexts to engage users” [1, 2, p. 268]. Specifically, ICT research on gamification in a marketing context shows that a major purpose of gamification is to support branding and other customer-oriented marketing goals [3]. The objective of this study is an exploration of the outcome of an advergame on customer’s attitude formation through the conceptual lens of the ABC model of attitudes. Advergames are serious games with marketing and promotion intent where brands or products appear with a specific relation to the game [4]. Present research on advergames refers to analyses of different game designs [5], but does not yet shed enough light on its impact on customer behavior. By obtaining deeper insights into affective, behavioral, and cognitive responses to an advergame, this study seeks to investigate the role of advergames in a tourism marketing context.

## 2 Related Work

### 2.1 Gamification in a Service Marketing Context

In a service marketing view, gamification is a process of gamifying, i.e. enhancing a core service with motivational affordances in order to invoke gameful experiences and further behavioral acts [3]. In this context, gamification can be implemented as gamified applications [1] or serious games that can both be initially a core service which is later gamified. Whereas gamified applications are characterized by game design elements in a nongame context, serious games are full-fledged games whose main purpose is not to entertain, but to educate, inform, motivate etc. [6]. Serving mainly hedonic values such as fun, enjoyment, and playfulness [2], gamification can

particularly support product and service categories that are themselves hedonic in nature. As a result, tourism companies are increasingly engaged in gamification.

## **2.2 Attitude Formation in Gamification**

Individuals can form their attitudes based on three components in the ABC framework [7]. The ABC model of attitudes assumes that attitudes are formed of affect, behavior and cognition [8]. The importance of these ABC components varies with their respective importance for the individual and the situational context in which decision making occurs. As playing a game is hedonic and takes place in a highly involved context, gamification provides emotional attachment to a service that leads to forming positive attitudes towards it [9].

## **3 Research Methodology**

Given the early stage of research in the field and the lack of empirical evidence on user interaction and behavior in advergames, this study is exploratory. A qualitative in-depth research design was used to establish a first understanding of possible effects of advergames on consumer behavior variables.

### **3.1 Data Collection and Sample**

Data collection took place by semi-structured in-depth interviews. The context of research is the advergame "Austria Snapshot Adventure". Data collection consisted of four steps: (1) the participants' prior knowledge about Austria was recorded, (2) the participants were requested to play the advergame "Austria Snapshot Adventure", (3) the respondents were asked for the recall and recognition of various items that appeared in the advergame, (4) the respondents were interviewed about their learning and cognition, feelings, interactions with the advergame, and behavioral intention. The sample was recruited from international students studying at a large Austrian university who have stayed in Austria no longer than one year. The final sample size was determined by the degree of saturation in the data [10]. This procedure resulted in a total of 16 interviews. The sample consists of four male and twelve female respondents aged between 20 and 25 years from Asia, Australia, the EU, and USA.

### **3.2 Data Analysis**

The recorded responses were transcribed and coded with NVivo. We conducted open, axial, and selective coding [11] whereby we used literature as an analytical tool during the data analysis [12]. The categories that were obtained from coding are separated into cognitive, affective, and behavioral responses whereby behavior consists of two dimensions, i.e., intention to visit destinations and interaction with the advergame. During final selective coding, we unified all categories around the visiting intention that was identified as being influenced by the other categories.

## **4 Results**

### **4.1 Affective Responses**

To explore affective responses, the interviewees were asked about their feelings and experiences during and after playing the advergame. The most frequently mentioned feeling was fun, followed by curiosity about shown destinations, joy and happiness. The majority of reported negative feelings such as frustration are due to perceived lacking performance or difficulty of the advergame.

### **4.2 Behavioral Responses**

The first component of behavioral responses refers to the behavior during the play of the advergame. Only a minority of the respondents collected additional information about the destination and used the interactive element of taking a snapshot and sharing it with others on social media, as they were not aware of them or do not take snapshots while playing in general. The second aspect of behavior relates to the intention to visit the destinations shown in the advergame. Half of the respondents report that they intend to visit destinations that appeared in the advergame. Their intention to recommend visiting Austria as a tourist destination is mainly based on their belief that Austria is generally interesting to visit.

### **4.3 Cognitive Responses**

For ten respondents, the advergame was able to increase awareness of destinations. Further, some interviewees point out that repeated playing of the advergame will strengthen the awareness of destinations that were not known before or strengthen their memories about places they have visited. The respondents whose awareness was not increased by the game mainly point at the focus on playing that prevented them from perceiving the surrounding destinations. When it comes to learning, respondents reported that they learned about less well-known or marketed destinations and that the advergame increased their familiarity with Austrian destinations in general.

## **5 Discussion**

The results show that if a tourist destination decides to use gamification in promotion it should consider several issues: (1) as visiting a tourist destination represents a need to create hedonic experience it should focus on providing affective responses in users; (2) creating positive feelings after playing the advergame motivates users to engage and express intention to visit certain tourist destinations; (3) with creating behavioral response and forming intention users develop beliefs that certain tourist destinations are worth visiting; (4) users' focus on rewards can motivate them to collect points and progress through the game, however, that can prevent them from focusing on exploring the surroundings and creating attitudes towards the shown destinations.

## 6 Conclusion

Following the understanding that gamification can be applied in a game context, the study investigated an advergame's potentials to form key attitudinal factors, i.e., affect, behavior, and cognition towards tourist destinations. The results confirm the notion of the ABC model but at the same time show that human-computer interaction in an advergame plays a key role. Limitations are related to the student sample, thus a study among real tourists would achieve more generalizable findings. While this study is exploratory in nature, it should be complemented by causal research and respective quantitative studies. Future research should also consider the perception of game design as it may drive evaluations of functionality. Finally, the advergame should be tested in neighboring countries to reveal whether it motivates users to visit Austria.

## 7 References

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