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Summary. Studies have shown that first impressions of websites can lead to lasting opinions regarding usability and trustworthiness. However, little research has been conducted concerning first impressions of video games, specifically game box covers. College-age students were asked to view and rate images of game box covers after a brief exposure while their eye movement patterns were recorded. Results revealed that participants reliably form different impressions (e.g., fun vs. boring) about certain video games based on only a brief viewing of the game box cover. Analysis of eye tracking data revealed that participants viewed the front image, side title strip, and front game title the most.

This is a summary of the article titled "Can You Judge a Video Game by Its Cover? An Exploration of Subjective Impressions and Eye Movement Patterns" in the Proceedings of the 17th International Conference on Human-Computer Interaction in Los Angeles, CA 2015.

Introduction

Conventional wisdom tells us that first impressions matter, especially when we are meeting someone new or deciding whether we should try or buy an unfamiliar product. A substantial body of academic literature exists about the topic of first impressions. Specifically, many studies have focused on first impressions in relation to person perception and social cognition (Ambady & Skowronski, 2008). For instance, Willis and Todorov (2006) showed that in as little as 100-ms exposure participants were able to make specific trait judgments about a person (e.g., likeability, trustworthiness, and competence) just by viewing his/her face.

In the Human-Computer Interaction (HCI) domain, there are a growing number of studies examining first impressions in relation to user interface and product design. In particular, researchers found strong relationships between user's initial impressions of interface aesthetics and their a priori and post facto evaluations of system usability (Kurosu & kashimura, 1995; Tractinsky, 1997; Tractinsky, Katz, & Ikar, 2000). Additionally, researchers have found that users may form an impression of a website in as little as 50 ms (Lingaard, Dudek, Den, Sumegi, & noonan, 2011; Lingaard, Fernandes, Dudek, & Brown, 2006). Lindgaard and colleagues [6] also found that first impressions not only influenced the visual appeal of a website, but also its perceived trustworthiness and usability.

The main goal of this study was to explore people's first impressions about game quality and content based on images of video game covers. The following questions were examined:

- Are people able to form first impressions about a video game from a brief exposure to the game box cover?
- What portions of the game box cover do people view to form first impressions?

Method

Participants

Twenty native English-speaking undergraduate students (11 female; age: M=21.45 years, SD=4.24 years) participated in the study. All but one reported that they were video game players. Of the 19 game players, 2 self-identified as "Newbie/Novice", 11 as "Casual", 5 as "Core/Midcore", and 1 as "Hardcore/Expert" gamer.

Materials & Procedure

Fifty-two Xbox 360 game covers were presented in the study (four covers were used in practice trials). Forty-eight of the covers were from less popular game titles. Prior to the

popularity scale. Four covers were selected for each of the 11 major game genres (see Table 1). None of the participants had previous experience with playing any of the video games that they viewed in the study.

The EyeLink 1000 was used to track participants' eye movements, and a chin rest was used to keep participants' head stable throughout the experiment. Fixations were automatically defined in the system as the periods between saccades (velocities > 30°/sec and accelerations > 8000°/sec^2) that are not blinks (Nguyen, Owens, Chaparro, Chaparro, & Palmer, 2012). All images presented were 3000×2000 in pixels. A keyboard and mouse were used to record participants' responses.

All 52 game covers were presented in a random order to every participant. After each cover was viewed, participants were asked to complete seven subjective ratings about the game on a 9-point Likert scale similar to what Lindgaard and colleagues [6,7] used. Only one attribute rating targeted the game covers (i.e., visual complexity), the remaining five attributes (excluding game familiarity) asked participants to evaluate the games themselves based on what they saw from the covers (see Table 2).

The first four game covers that participants saw were presented as practice trials to allow participants to be familiarized with the general procedure of the study. Excluding the practice trials, participants were offered a 5-minute resting period for every 16 trials they completed. Participants took about 60 minutes to complete the study.

Table 1. List of 48 less popular game titles per genre.

Table 2. List of subjective ratings according to the order in which they were asked (top = asked first; bottom = asked last).

GameTable2

Results

Subjective Rating Differences among Game Box Covers

Six dependent samples *t* tests were conducted comparing the highest- and lowest-rated game covers in order to assess whether first impressions about a game can be formed based on a brief exposure of the cover. Bonferroni correction method was implemented to control for family-wise type I error. Results revealed that there was a significant difference between the highest- and lowest-rated game covers per subjective attribute rating, $p < .01$ (see Figure 1). This indicated that participants reliably perceived certain video games as better designed or more fun based on a 20-second viewing of the game covers.

Gmae

game2

Figure 1. Highest and lowest rated video game covers.

Viewing Patterns across Game Box Covers

Eye tracking data were analyzed in order to examine how people viewed the video game covers. Each game cover was divided into nine natural segments (front image, side title, front title, back image, front Entertainment Software Rating Board (ESRB) label, back ESRB label, back other information, Xbox 360 header; company logo), which are commonly referred as areas of interest (AOI).

The first three AOIs that participants typically fixated on were the: front image, side title strip; front game title. The three AOIs that tended to be visited last were the: the other information area

and front ESRB label (see Figure 2).

AOI

Figure 2. Eye-tracking data sample of a video game cover

Discussion

The findings in this study support the notion that first impressions of a video game can be formed by simply viewing the game cover for a short duration. Specifically, participants were able to develop general impressions about the quality and content of the games (e.g., design quality, violence level).

Eye tracking data suggests that the front image area of the cover was viewed first and the longest, and may possibly be the most influential to first impressions. Overall, these results suggest that careful thought and care should be given to the overall design of game covers since users rated game design quality, entertainment value, and purchase likelihood similarly.

Future studies should examine how these perceptions might change after participants played the games, as well as uncover specific design elements on game covers (e.g., contrast, color scheme, text density) that contribute to both positive and negative first impressions of video games.

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