The Influence of Sound Design in Videogames on Brand Awareness: An Acoustic Branding Study for MLP and the audio consulting group

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Key Words

acoustic branding, sound logos, sound design, videogames, brand awareness

Abstract

The purpose of the report is to assess the influence of sound design in online videogames on user behaviour as well as brand awareness. An online survey (n=149) consisting of four groups has been set up – one control group, one group which was exposed to different sound logos and two groups, which were asked to play a videogame. Both groups played the same game. One of them with non-branded, the other with branded sound design.

The main finding of the report was that sound logos learned in videogames can be connected to a brand. Further, videogames with a branded sound design influence the level of brand recognition positively. Moreover, a branded videogames can affect perceived brand values and hence, brand image. Otherwise, the branded sound design had no influence on user behaviour or different aspects of brand awareness.

1. Introduction

1.1 Key Concepts

This study is based on three key concepts – sound design, videogames and acoustic branding.

The term sound design can hereby be defined as the process of creating a desired sound with technical support (Vo, 1994), which has further been supported by Ikonen (2012), who adds time as a relevant factor differentiating sound design from other design areas.

Furthermore, it is necessary to define videogames, in order to see whether the game used for this study can be classified as such. Esposito (2005) classifies videogames as *"a game, which we play, thanks to an audio-visual apparatus and which can be based on a story"*. His definition goes along with Tavinor (2008), who describes videogames as "an artefact in a digital visual medium, which is intented primarily as an object of entertainment, and is intended to provide such entertainment through the employment of one or both of the following modes of engeagement: rule-bound gameplay or interactive fiction". Here, Ikonen (2012) is using the terms Ludologists and Narratology, which in the end signify the same purposes within a game, namely entertainment or a story. Combining these two concepts one must keep in mind that the purpose of making sound effects and background music for any game is to enhance the experience, demonstrate fun and create an attractive atmosphere. Repetition, redundancy and boredom need to be avoided (Drescher, 2006). Further, the sound design being used in this research project combines the approaches of Bernstein (1997) and Ekman (2005), who classify sounds depending on the purpose they have in-game. According to Ikonen (2012) sound design is essential, as it can provide feedback sounds, immerse the player into the game and thus, increase the emotional connection between both.

Acoustic branding can best be described by Krugmann (2007), who sees it as the integrated planning, guiding, controlling and coordination of market-related acoustic stimuli through a determined usage of the

whole identity-based brand management process. As not every aspect of an acoustic identity can be taken into account, this study focuses on the sound logo (audio logo), which has been integrated into the sound design of the videogame. A brand's sound logo can be defined as the audio counter-part to a brand's visual logo (audity, 2011). The results are based on the sound logo as well as videogame of the company MLP.

1.2 Theoretical Framework

Directions of the research are focussing on three models, namely classical conditioning, the elaboration likelihood model and the model of musical fit.

Classical Conditioning has been used by Gorn (1982) for the first time in an advertisement context. He was able to demonstrate through an experiment that pleasant, respectively unpleasant music has an effect on brand preference. However, further studies (Allen & Madden, 1985; Kellaris & Cox, 1989) were unable to repeat the outcome.

Based on classical conditioning Petty et. al (1983) developed a model for persuasion, namely the elaboration likelihood model (ELM). A person can be high- or low-involved in a persuasion process. Being in a state of low-involvement, a person can connect the desired object with acoustic cues (Petty et al., 1983).

Further, the model of musical fit states both ways of persuasion, low and high involvement can be influenced through musical cues. However, the musical cues must be fitting, respectively being directed toward the ad, in order to work adequately (MacInnis & Park, 1991; North et al., 2004; Zander, 2006).

The above mentioned models serve as a basis for the hypotheses.

2. Methods

2.1 Hypotheses

Based on the findings from the literature review the following hypotheses have been created and will be tested:

H1: Branded sound design in videogames does not influence the referral rate of users.

H2: Sound logos cannot be learned and recognized by being implemented in the sound design of videogames.

H3: Sound logos learned in-game do not influence brand recall.

H4: Unlearned sound logos do not influence brand recognition.

H5: Videogames with a non-branded sound design do not have an influence on brand recognition.

H6: Videogames with a branded sound design do not have an influence on brand recognition.

H7: Sound logos learned in-game do not influence brand image.

2.2 Research Design

The study used a mixed method approach, containing quantitative as well as qualitative research in the form of an interview and an online survey. Research was conducted over the particular period of eight weeks, making this project cross-sectional (Saunders et al., 2007).

2.3 Research Data Collection and Analysis

The game used in this survey has been developed for MLP's marketing campaign. The tested versions for this study differed in terms of branding only.

In order to test the influence of sound design in videogames on brand awareness, an online survey has been designed. No pilot study was conducted, as the questionnaire was mainly based on previously used data (Vovici, 2008; North et al., 2004; RMS, 2006). Participants were randomly assigned to one out of four groups, 1 control group and 3 test groups. Resulting in at least 30 participants per group, to receive statistically reliable results (Chang & Huang, 2006). However, group sizes differed in numbers. All respondents were confronted with the same demographic questions. The control group was questioned about brand

awareness only. The first test group was further questioned about different corporate sound logos. Both groups did not play the videogame. Only the second and third test group were asked to further play the videogame with a non-branded, respectively branded sound design. The groups were then questioned toward their level of recognition, recall and liking of the specific sound logos.

	Playing videogame with		Sound logo	Brand awareness
	Non-branded sound design	Branded sound design		
Control group				x
Test group 1			x	x
Test group 2	x		x	x
Test group 3		x	x	x

Table 1. Test design

Respondents were gathered by spreading it to different universities within Germany. It can be assumed that the results have not been influenced by this as the initial target groups of the game were students as well. Further, the respondents generally fit into the target group of MLP in terms of age, education and occupation. The survey took place for two weeks of the project and each participant was asked between five and 25 questions, depending on the group, they were assigned to. All data was collected anonymously.

In order to test the hypotheses, two different methods have been used, namely the Chi-Square test as well as Cramer's V. Hereby, the Chi-Square method was used to determine associations between categorical variables. A level of 0.05 was the significant threshold. Further, Cramer's V was used to specify the strength between two variables (Saunders et al., 2007).

3. Results

3.1 Descriptive

In total 149 respondents replied to the online survey, of which 61.7% were male and 38.3% female. Further, 71.8% of all respondents were between 22 and 34 years, followed by 19.5 being 21 and younger. Moreover, the majority, with 53% either held a Bachelor or Master's degree. Finally, 66.4% of all respondents were students, while still 24.2% were regular employees.

Besides the regular demographic profile, the survey provided data about the liking of MLP's sound logo. One can see that the participants rated it rather well, if they have played the branded videogame (shift from 46.7% to 66.7%), instead of non-branded (shift from 36.7% to 15.4%).

Moreover, the brand awareness, for the company MLP has been measured. Here, one can see that the control group, which has been exposed to the brand name only, showed a general brand awareness rate of 16%.

3.2 Results

In total seven hypotheses were tested. Whereas the hypotheses had to be accepted in four cases.

The first hypothesis stated that branded sound design in videogames does not influence users referral rate. It had to be accepted, as a Chi-Square score of 0.535 with a degree of freedom of 1 was not significant. Meaning integrating branded sound design has no negative effect on the user experience.

The second hypothesis has proven that integrating sound logos in videogames does not support recognition of the sound logo significantly, as the Chi-Square score of 0.732 shows.

With a Chi-Square score of 10.360 and a degree of freedom of 2 (leading to a p-value of 0.006), a significant correlation between the group variable and the recognition, respectively relation of sound logo to

brand, could be measured. The third hypothesis had to be rejected, meaning sound logos learned in videogames aid brand recall. Furthermore, Cramer's V showed a medium-strengthened correlation between the two variables, with a value of 0.323.

As expected, the fourth hypothesis, pointing out that no correlation exists between unlearned sound logos and the level of brand awareness, had to be accepted based on a Chi-Square result of 0.006.

Also the fifth hypothesis which stated that videogames with a non-branded sound design do not have an influence on the level of brand awareness, had to be accepted as it is supported by a Chi-Square result of 0.662 for a degree of freedom of 1.

In addition to the sole recognition of the sound logo, it has been tested whether the branded sound design significantly influences the brand awareness. As mentioned earlier, the brand awareness was at a rate of 16%, which increased to 23.3% for participants that played the non-branded videogame and even to 33.3% after participants played the branded videogame. Despite this strong trend, hypothesis 6 had to be accepted, as a Chi-Square score of 3.651 and a degree of freedom of 1 (leading to a p-value of 0.056) shows.

Also the seventh hypothesis (videogames with a branded sound design cannot influence image values of a brand) had to be accepted. In this example three values show a strong trend by the branded sound design, namely being conservative, trustworthy and conventional. However, the Chi-Square scores were 2.265, 3.651 and 2.735, all of them at a degree of freedom of 1 leading to p-values of 0.132, 0.098 and 0.098.

4. Discussion

4.1 Conclusion

Companies have nothing to lose when integrating branded audio elements into online videogames. As hypotheses 1 proved, it does not make games less attractive for users and demonstrates similar fun as referrals rates have not been influenced. However, companies can use branded

audio elements in videogames to enhance their level of brand awareness (strong trend on p=0.0056 level but no significance). Results of the online survey show that participants were able to relate the sound logo significantly more often to a specific brand, after having played the branded videogame. Moreover, brands can influence their level of recognition, by using branded sound designs in their videogames. Finally, brands should consider their desired brand identity and perceived brand image. Previous findings show that music can prime attitudes toward a brand (MacInnis & Park, 1991) as well as connect a brand, which is connected to musical cues to different values (Stewart & Punj, 1988; Stewart et al., 1990). Even though none of the image values has been influenced significantly, it can be concluded that there is a robust trend that videogames have an influence on the brand image. Therefore, future research should take the gap between actual and desired brand image into account.

4.2 Limitations

The findings of the project were as expected; however, there were limitations which should be taken into account for future research.

First, an existing videogame with an existing sound design has been used. Hence, only the factor "branding" has been tested but not the influence of sound design itself. Moreover, the report misses an in-depth analysis of MLP and has been tested for a given set of values, which have not been compared to MLP's desired ones. Thus, different values might be affected as well and influence MLP's brand image. Furthermore, the effect of the game itself has not been tested.

Second, normally users play videogames more often. It might be expected that recognition and recall values will improve with higher contact rates.

Third, the sample sizes required for the Chi-Square to work appropriately is 5, per crosstab calculation. However, as the brand MLP was relatively unknown, an unsufficient number of answers was given. Hence, the answers regarding influence on brand values can be seen as

an indicator rather than a statistically significant outcome. Further research should take the demographic as well as psychographic factors into account. In addition, it can be recommended to test the influence on user behaviour, in terms of time played, in order to test the effect of branded sound design on consumers.

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