

Study for the Effectiveness of IoT Technologies Applied Advertisement

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Abstract. This paper is prepared to know the relation between the perceived interactivity and the effect of advertisement. For this purpose, an advertisement, which the Internet of Things (IoT) technologies are applied, is used. An orientation process for IoT and IoT technologies applied advertisement is carried out to people who are the subjects of this research. Then, a survey is conducted after watching an IoT technologies applied advertisement. We conclude the customers who have higher perceived interactivity show the positive advertisement attitudes in compare with the customers who have lower perceived interactivity.

Keywords: Internet of Things (IoT), IoT Technologies Applied Advertisement, Perceived Interactivity

1 Introduction

Recently, many advanced IT technologies are intensively used in the variety of areas. Advertisement field is one of the areas which such IT technologies are applied broadly. A latest research shows that the IT technologies applied advertisements brought the positive effects [1]. However, not many empirical studies were conducted to apprehend these effects so far. This research tries to verify the effect of Internet of Things(IoT) technology applied advertisement based on an idea that an empirical study about the relation between IT technologies and advertisement will help to the ad-marketing in the future. Further, this research also checks how the perceived interactivity makes an impact on the IoT technology applied advertisement.

2 Background Knowledge

Internet of Things (IoT) attracts attention as the essential technology in the future. Many experts in ICT fields anticipate that 'Hyper Connected Society' will come by grafting IoT technologies. IoT is working on three technologies: Cloud(Storage of data), Network(Neural circuit for transferring of other things' response) and Sensor(Collecting data)[2,3].

The IoT technologies are the intellectual communication tools which connecting things to things as well as connecting people to things. This technology can be applied various fields like other technologies did. Advertisement would be one good example to use IoT technologies very effectively. Interactive characteristics of IoT technologies will be expected to provide a variety of experiences to the consumers.

3 Designing Experiment

This study is done to see how a perceived interactiveness variable to the IoT technologies applied advertisement has an effect to the advertisement attitudes. According to the previous researches, the advertisement attitudes were changed in accordance with the perceived interactiveness. Based on these studies, we assume higher perceived interactiveness to the IoT technologies applied advertisement will bring more positive advertisement attitudes. On the other hand, lower perceived interactiveness will bring less positive advertisement attitudes relatively. Thus, a hypothesis for this study is: " higher perceived interactiveness to the IoT technologies applied advertisement will show more positive advertisement attitudes in compare with lower perceived interactiveness. For this hypothesis, we count a perceived interactiveness and the advertisement attitudes as two important variables.

Table 1. Variables and Measuring Items [4]

Variable	Measure Items
Perceived Interactiveness	Can access instantly for the product information
	Can have instant response
	Can interact actively with the advertisement
Advertisement Attitudes	Have a good feeling
	Be trustworthy
	Be informative
	Be interest

We used an IoT technologies applied advertisement, 'EPIC Semiconductors Internet of Things.' This ad was shown to 223 university students who are assumed to be a main target to the IoT technologies applied advertisement. After watching this ad, a survey is conducted to verify our hypothesis. We used SPSS 19.0, and Excel program for the statistical process, and we did t-test and ANOVA(Analysis of Variance). As described above, a perceived interactiveness and the advertisement attitudes are two

variables. The measured items for a variable, a perceived interactiveness are "Can access instantly for the product information," "Can have instant response," and "Can interact actively with the advertisement." And, the measured items for a variable, the advertisement attitudes are "Have a good feeling," "Be trustworthy," "Be informative," and "Be interest." Table 1 shows two variables and their measured items.

4 Analysis

We measured the value of Cronbach's Alpha to see the internal consistency reliability for a perceived interactiveness variable. The items for the perceived interactiveness are "Can access instantly for the product information," "Can have instant response," and "Can interact with the advertisement actively." And the items for advertisement attitude, which is a dependent variable for this research, are "Have a good feeling," "Be trustworthy," "Be informative," and "Be interest." We got more than 0.7 for all seven items. The measuring items are considered as good ones to see the internal consistency reliability if a measured value is more than 0.7. Thus, we accepted the measured values for the measured values for the variables.

We assumed that the customers who have higher perceived interactiveness show the positive advertisement attitudes in compare with the customers who have lower perceived interactiveness. According to the analysis, the more positive advertisement attitudes were appeared when the customers who have higher perceived interactiveness ($M=3.97$). (In case of the customers who have lower perceived interactiveness, $M=3.35$) We adopted this hypothesis, because there was significant statistical difference ($p<0.01$).

5 Conclusion

This study analyzed customers' attitudes of advertisement based on the perceived interactiveness for the IoT technologies applied advertisement. The result for this study as follows: For the IoT technologies applied advertisement, the customers who have higher perceived interactiveness show the positive advertisement attitudes in compare with the customers who have lower perceived interactiveness. This means that the customers who have higher perceived interactiveness show more preference for the IoT technologies applied advertisement..

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