Technology has brought about profound changes in the advertising industry, affecting both consumers and businesses. These changes are mainly due to new technological tools that made it possible to target consumers based on their location, interests, age, and many other factors. Today, companies can tailor advertising campaigns based on the behavior of potential consumers from Internet usage, and send messages based on each consumer’s geographical location, areas of interest, history of Internet browsing, and demographic characteristics. In addition, the impact of using smartphones has grown to such a great degree that it has become a necessity not only for communications but also for other things such as game playing and entertainment, reading, writing, shopping, social networking, teleworking, etc.

Research problem

There has been a two-fold increase in smartphone usage in the past three years. Since 2014, smartphones have led the growth in digital media consumption (Lipsman & Lella, 2017). The average person spends 2 hours and 51 minutes a day on a mobile phone (Lipsman & Lella, 2017). In 2018, it is expected that the average time spent per day with mobile Internet, among US mobile users, will be 3 hours and 25 minutes for in-app usage versus 51 minutes for mobile web usage (“US Mobile Usage: Top 5 Stats to Know,” 2016). According to Lipsman and Lella (2017), “Mobile now represents almost 7 in 10 digital media minutes, and smartphone apps alone account for half of all digital consumption.” In addition, ads in mobile apps have become an integral part of the apps themselves. However, based on an analysis of the literature, there is a lack of knowledge about the consumer’s behavior toward the ads presented within mobile applications. Therefore, the research problem can be summed up in this question: Do ads within mobile applications influence the behavior of consumers?

Research objectives

Identifying the relationship between mobile in-app advertising and consumer behavior.

Research Hypotheses

H₁: There is no significant relationship between in-app mobile advertising and consumer behavior.

Research sample

The research sample consisted of a convenient sample of graduate and undergraduate students who use smartphone apps and are enrolled in the Ernest C. Trefz School of Business at the University of Bridgeport.

Research Contribution

Applications are a ubiquitous part of smartphone usage. Ads within apps have become commonplace and seem to be accepted as a fact of mobile life for consumers. From the literature, the effect that these ads have on consumer behavior is unclear. This research seeks to provide an understanding of the positive or negative effects that in-app ads have on consumer behavior, including purchase behavior.

Research Population, Sample, and Unit of Analysis

This study was conducted at the University of Bridgeport, in Bridgeport, Connecticut, USA. The University of Bridgeport is known for its diverse student population. To achieve the objective of this study, an electronic self-administered questionnaire using Google forms has been designed and electronically sent to student emails addresses including a convenient sample of about 300 graduate students’ emails and about 350 undergraduate students’ emails. All were enrolled for the Fall 2017 semester in the University of Bridgeport, Trefz School of Business. The emails requesting student participation in the study were sent by the associate deans of graduate and undergraduate programs.

Study Instrument

The researcher has built an online self-administered questionnaire. It consisted of four parts. The first part contained demographic questions of the respondents (i.e. age, gender, education). The second part consisted of questions about smartphone usage (i.e. do you use a smartphone, do you use apps with your smartphone, and have you seen ads while using mobile apps). The third part consisted of questions to measure respondents’ attitudes toward mobile in-app advertising content (entertainment, informativeness, credibility, and irritation) in comparison with traditional advertising. Scale anchors were “much less,” “less,” “more,” and “much more.” The fourth part of the questionnaire consisted of questions related to respondents’ behavior toward mobile in-app advertising (i.e. sought out information, called the company/went on their website, told a friend about the product, and purchased the advertised product) in comparison with their behavior towards traditional advertising. Scale anchors were “much less frequently,” “less frequently,” “more frequently,” and “much more frequently.”

Sample characteristics

125 responses were received of which 121 questionnaires were found complete and valid for statistical analysis after filtering students who did not have smartphones and did not have exposure to ads when using mobile apps. The percentage of males (57.9%) was higher than the percentage of females (42.1%). In addition, the highest number of respondents was concentrated in younger age groups, where 54.5% of the respondents were aged from 18 to 25 years. Moreover, the analysis shows that more graduate students have participated in this study than undergraduate students by 13.6 percent.

Hypothesis Testing

The R-value from the analysis indicates a positive correlation of (.678) between the two variables (i.e. mobile in-app advertising and consumer behavior). The coefficient of determination (R-square) for our model is (.460), which means that the independent variable (i.e. Mobile in-app advertising) can explain 46% of the change in the dependent variable (i.e. Consumer Behavior). In addition, the Unstandardized Coefficient (B) equals (.789), which means that the dependent variable (Consumer Behavior) goes up by (.789) when the independent variable (mobile in-app advertising) goes up one unit. Moreover, the results shows that there is a significant impact of the independent variable (i.e. Mobile In-App Advertising) on the dependent variable (i.e. Consumer Behavior), (β= .678), (F(1,119) = 101.179; p < .05), therefore, the null hypothesis is rejected.

Findings and Discussion

The study results indicated a positive correlation between mobile in-app advertising and consumer behavior. In addition, the results revealed that mobile in-app advertising could predict 46% of the variance in consumer behavior; also, the results indicated that an increase in mobile in-app advertising by one unit resulted in an increase of 78.9% in consumer behavior. The results confirmed the soundness of mobile in-app advertising on affecting consumer behavior.

Implications

The results demonstrated the importance of mobile in-app advertising on affecting consumer behavior. It is suggested that it is good for marketing managers to pay more attention to mobile in-app advertising and pay attention to the changes in techniques and technologies while taking into account the rapid developments in this field, which could further improve the increase in desired consumer behavior.

Selected References