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Website Useability as an Antecedent of Online Purchase Intention: The Case of Ethiopian Airlines

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Abstract

This research thoroughly studied the effect of website useability on online purchase intention and the official website of Ethiopian Airlines, www.ethopianairliens.com, to identify major variables which significantly influence purchase intention. The study used the WEBUSE development model (content, organisation, and readability; navigation and links; user interface design; and performance and effectiveness) to measure website useability. The model was also used for the development of the conceptual framework and hypothesis construction. Using explanatory research design, a questionnaire was shared in travel and tourist guide groups found on different social media, with the intention of tracing online customers of Ethiopian Airlines. Based on the analysed data, it is observed that content, organisation, and readability and navigation and links have a weak relation with online purchase intention. In contrast, user interface design and performance and effectiveness showed a strong relation with online purchase intention

Keywords: Online Purchase Intention, Website Useability, Content, User Interface Design, Website Performance and Effectiveness

Introduction

For firms that rely on online transactions, useability is critical, because customers cannot execute a purchase unless they find the product they are looking for (Acharya, Kagan, Lingam & Gray, 2008). To make buying decisions, customers collect information using their knowledge, options, and external environments, to assess alternatives. Considering the influence of useability, companies with e-commerce platforms require a full understanding of this variable. In contrast, Athapaththu and D. Kulathunga (2018) observed that the direct relationship between perceived ease of use and purchase intention is not significant, but it may act indirectly through website usefulness. They also concluded that businesses should focus on usefulness instead of ease of use.

Another research made by Jum and Jaafar (2011) showed that useability of online websites does not influence consumers' attitude. They claimed that even if online consumers were satisfied with the useability of online shopping websites it cannot become a factor that influences the consumers' attitude.

Even if there is a gap to fully contemplate the relationship between online website useability and purchase intention, previous literature in the field of purchase intention have studied the concept of useability in a manner presented above. In addition, they studied useability as a component of quality of service, which shows that the integration of useability and purchase intention is still an outstanding issue. This research then allowed us to understand the relevance of useability on purchase intention through different useability measurement aspects.

Literature Review

The Internet is the base for online shopping, and the website is the basic platform of online transactions. Accordingly, website useability has a significant influence on online customers' intention and transaction success. Different researchers tried to summarise several factors as a benchmark to understanding how useable a website is. Some of these factors are ease of use, response time, navigation, interaction, design, convenience, learnability, efficiency, site find-ability, and accessibility.

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Calisir, Basak and Barkana (2014) conducted a research to examine the surgeons' evaluations of the relative importance of the useability and functionality factors in the computer-assisted navigation system designed for cryoablation of kidney tumours. To gather data, survey is used as a methodology and the surgeons returned 12 completed questionnaires.

The results of their analysis imply that response time, efficiency, and ease of use are found to be the most important factors among useability factors, whereas interaction, navigation, and memorability are the least important factors.

Achievability and accessibility, auto-run, and data security are found to be the most important factors among functionality factors, whereas ability to interact with external systems, customisability, and validation are found to be the least important factors.

In terms of response time, ease of use and efficiency are the most important factors (Calisir, Basak & Barkana, 2014). This implies that respondents place higher emphasis on useability-related factors. Thus, the findings of this study may make a contribution to the early design stages of the CAN system for cryoablation of kidney tumours and provide a better understanding of the expectations and perceptions of surgeons (Calisir, Basak & Barkana, 2014).

Even if there are efforts in Web design research, enormous numbers of websites are still difficult to use. As per Jamshidi (2008), users of e-commerce sites successfully performed only 56 per cent of their intended tasks. Forrester Research has reported that 65 per cent of all online shopping tips end in failure and that 40 per cent of all visitors choose not to return to the site because of design problems. Clearly, useability can make or break a website.

As per the study conducted by Sam and Tahir (2009), useability is operationalised as the websites' ease of learning, ease of navigation, ease of use, instructiveness, clarity, and understandability. The Technology Acceptance Model (TAM) uses the perception of usefulness and ease of use to determine user's attitude towards a specified website. In their analysis on the relationship of website quality and consumer online purchase intention of air tickets, it is found that useability of the online website is positively associated with consumers' online purchase intention at an alpha level of 0.10.

In contrast, as per Jun and Jaafar (2011), a study conducted in three cities with higher Internet penetration in China, Shanghai, Beijing, and Fuzhou, it was observed that useability of online shopping websites does not influence customers' attitude. This is observed due to the fact that 79.2% of online customers were already satisfied with online website useability, which indicates that consumers' attitude cannot be influenced by this variable anymore.

Moreover, Athapaththu and D. Kulathunga (2018) analysed factors affecting online purchase intention, focusing on effects of technology and social commerce. Consequently, it is observed that there is no significant relationship between perceived ease-of-use and purchase intention ($\beta = 0.11$, $p > 0.05$); however, ease of use may act indirectly through usefulness. They specified that the importance of ease of use over usefulness has important implications for website designers and that they have to focus more on the usefulness of the website than its ease of use.

Useability evaluation can be performed using various types of techniques considering different variables, features, and characteristics of a system. Mack and Nielsen (1994) categorised useability evaluation methods into four categories: automated, empirical, formal, and informal evaluation methods.

The automated evaluation method computes useability measures by running user requirements through an evaluation software, while empirical method tests the interface with real users. The third method, formal, uses exact models and formulae to calculate useability measures, whereas informal methods of measurements are done based on rules of thumb and the general knowledge, skill, and experience of the assessors.

Consequently, Chiew and Salim (2003) evaluated four evaluation tools (WAMMI, WebSAT, Bobby, and protocol analysis) with 11 interdependent and interrelated useability aspects. These aspects are: user satisfaction emotional effect, learnability/ease of use, efficiency, user control, accessibility, navigational aids, content and organisation, user interface attractiveness, performance,

and readability. After an extensive study on related resources, they identified the following website useability evaluation criteria, based on the 11 useability aspects.

Theoretical Analysis and Research Methodology

Data Sources

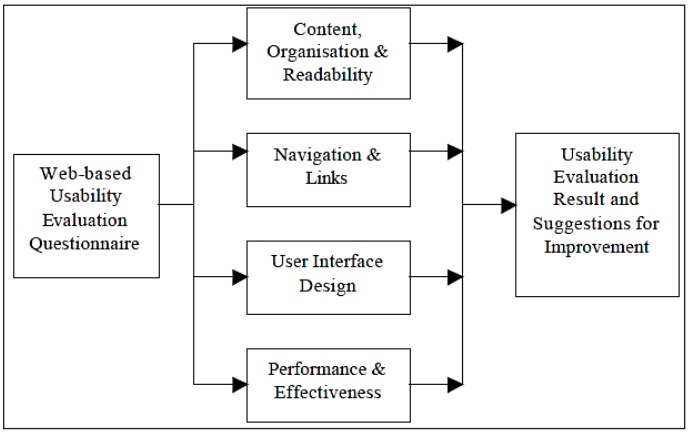
As classified by Mack and Nielsen (1997), there are four categories of evaluation methods that can be used to examine the useability-related aspects of a system. The approach selected to conduct this research is a quantitative research approach. Considering the nature of the research problem, purpose of the research, and research objectives, empirical approach is used to understand the real customers' reactions with regards to Ethiopian Airlines' official website's useability.

The population of this study is the total collection of online customers of Ethiopian Airlines above the age of 18. Among the customers of Ethiopian Airlines available on different social media groups, the research respondents were selected using the Cochran formula, with a confidence level of 95% (Z = 1.96), sampling error of 5%, and maximum variability of the population at 50%; a sample size of 385 respondents are used. These respondents were selected based on their prior website usage experience. Ethiopian Airlines customers who are active on Twitter, Facebook, and LinkedIn pages of the airlines were contacted by the researcher; they provided their responses after confirming that they have used the airlines' website for activities such as flight booking, information gathering, customer support, or any other service.

Chiew and Salim (2003) designed a website useability evaluation questionnaire after analysing different tools and methods of useability evaluation. The questionnaire they developed (called WEBUSE) is designed using a set of 24 useability guidelines unlike any another tools or methods. Thus, WEBUSE is used in this research. To collect data about online purchase intention, a question developed by Athapaththu and D. Kulathunga (2018) is used.

The WEBUSE (Website Usability Evaluation Tool) method is reliable and shows general useability reports using four categories, namely content, organisation, and readability, navigation and links, user interface design, and performance and effectiveness. WEBUSE is developed based on the model shown in Fig. 1.

The categories are developed using major useability guidelines as evaluation criteria. These are: limited website frames, limited scrolling, enhanced accessibility, less distraction, absence of orphan page, constant look, easily searchable, differentiated links, updated page, short download time, back button, too many new browser windows, respond appropriately, limited advertisements, information presentation, destination page described, standard look and feel, good contrast and page elements, organised texts, and navigational aids usage.



Source: Chiew and Salim (2003).

Fig. 1

Through combining the above two questionnaires, all variables are evaluated and the theoretical hypothesis is validated accordingly.

The questionnaire was sent to online customers of Ethiopian Airlines and they were asked screening questions to check if they previously used the website for purchasing flight tickets.

Variable Setting and Theoretical Hypothesis

The conceptual framework of this study is developed by combining the Chiew and Salim (2003) WEBUSE model and the works of Morwitz (2012), which explained the relationship between web useability and purchase intention.

The four main categories of website useability are used as useability aspect antecedents. So, by taking this as a base, to test the relationship between web useability and purchase intention, the researchers developed the following conceptual framework.

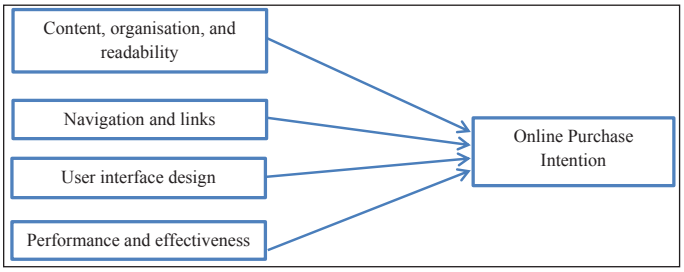


Fig. 2

In this model, the independent variables are shown on the left side of the model, directed at the dependent variable on the right.

The hypotheses of this study were established subsequently based on a careful empirical review and constructed based on the proposed conceptual framework.

H1: Content, organisation, and reliability of websites have a significant and positive effect on the purchase intention of Ethiopian Airlines' online customers.

H2: Navigation and links of websites have a significant and positive effect on the purchase intention of Ethiopian Airlines' online customers.

H3: User interface design of websites has a significant and positive effect on the purchase intention of Ethiopian Airlines' online customers.

H4: Performance and effectiveness of websites have a significant and positive effect on the purchase intention of Ethiopian Airlines' online customers.

Descriptive Statistics and Correlation Test of Variables

The data analysis technique used in this research is Statistical Package for Social Sciences (SPSS). This tool was used to analyse and summarise the collected data in a manner that is easy to understand and comprehend. SPSS is useful to measure central tendency (mean), dispersion (standard deviation), frequency distributions, calculating percentage, ANOVA, and tabulating them appropriately. Moreover, inferential statistics was used for calculating correlation and regression between dependent and independent variables. Correlation helps determine the strength of the relationship between variables; regression was performed to determine the level of significance of independent variables.

Research Model

Subsequent to the variable's identification and theoretical framework, the next phase is designing the research in a fashion that provides seamless insight from the gathered data.

The research design employed in this study is explanatory research. This study focuses on cause-effect relationships, explaining what causes produced what effects. This research seeks to discover the cause-and-effect relationship between website useability aspects and online purchase intention through ground experimentations.

Findings

The study assesses the effect of content, organisation and readability, navigation and links, user interface design, and performance and effectiveness on purchase intention in the case of online customers of Ethiopian Airlines.

From the collected sample size of 385 respondents, it was found that 48.8% of the respondents used the official website of Ethiopian Airlines for more than one year. Around 19.5% respondents have been using the website for 6-12 months, while the remaining 31.7% for less than six months.

A majority of the respondents (65.7%) previously purchased products or services online from the official website. The remaining 34.3% of the respondents previously used the website, but did not purchase any product/service online from the official website of the airline.

The descriptive statistics analysis of the independent variables shows that the mean value and standard deviation of content, organisation and readability are 3.71 and 0.725, of navigation and links are 3.53 and 0.727, of user interface design are 3.79 and 0.710, and of performance and effectiveness are 3.29 and 0.835, respectively.

Correlation analysis indicated that independent variables such as content, organisation and readability, navigation and links, user interface design, and performance and effectiveness are moderately correlated with the dependent variable, which is online purchase intention.

The ANOVA statistics presented the regression model significance. An F-significance value of df (4, 380), with $P < 0.05$ was established, showing that there is a probability of less than 0.05 of the regression model. Thus, the model is significant.

From multiple regression results, the estimate of the regression weight shows that only two of the independent variables, user interface design ($\beta = .192$) and performance and effectiveness ($\beta = .319$) significantly affect customers' online purchase intention. On the other hand, content, organisation and readability ($\beta = .105$) and navigation and links ($\beta = .122$) are statistically insignificant towards online purchase intention.

The R value represents the multiple correlations and is 0.636, which indicates a moderate degree of correlation between the independent variables and online purchase intention. The R2 value indicates that only 40.5% (0.405) of the dependent variable is explained by independent variables. This depicts that the model accounts for only 40.5 % of the variations in online purchasing influence, while the remaining 59.5% is unexplained by the regression model. Adjusted R square is 0.398, and measures the number of independent variables.

Thus, the result of the quantitative analysis has shown that content, organisation and readability and navigation and links have the smallest significance magnitude with online purchase intention, whereas user interface design and performance and effectiveness showed a strong relation with online purchase intention.

Conclusion and Inspiration

Conclusion

The statistical analysis and summary of the findings result in the below conclusions, and assess the effect of website useability on customers' online purchase intention using four aspects of useability: content, organisation and readability, navigation and links, user interface design, and performance and effectiveness.

The descriptive statistics analysis proved that most of the respondents were moderately satisfied with the website useability aspects of Ethiopian Airlines' official website. Hence, it is concluded that useability of the website was not successful to fully satisfy the customers.

Similar to the study of Sam & Tahir (2009), the results of the correlation analysis discovered that website useability is moderately correlated with online purchase intention in the case of Ethiopian Airlines' online customers.

In this study, two of the website useability aspects, user interface design and performance and effectiveness, are an important factor for positive online purchase intention. Ethiopian Airlines should also enhance these aspects going through the official website once again.

Inspiration

As rivalry in the airline industry intensifies, the need for improving website useability will be necessary. Airlines should evaluate their websites from customers' perspectives and follow a standardised design guideline for improving website useability and access.

A website should be able to serve any customer with basic computing skills. Effectiveness, performance, and user interface design should enable customers to get what they want very easily. Thus, useability has the potential to act as a great equaliser of competition, putting Ethiopian Airlines on an equal footing with larger airlines in attracting more customers and retaining existing customers.

Since website useability is moderately correlated with online purchase intention, all businesses trying to reach online customers should invest more time and resources on performing useability test surveys and improve website useability aspects that were used in this research.

To improve online purchase intentions, cultivating the areas of website performance and effectiveness features and user interface design is highly advocated. This will lead to a positive outcome.

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