Identification of the characteristics of e-commerce websites

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Abstract

E-commerce websites must possess certain characteristics in order to attract customers/users. Although previous studies have been conducted to determine some of these characteristics of different categories of websites, but the characteristics unique to e-commerce websites (i.e. online stores) remain unknown. To obtain a comprehensive view of these characteristics, this study uses a focus groups study. Although this study is exploratory, it identified as many as 13 characteristics, which include: security, appearance, adequate information about products and services, speed in downloading the pages, navigation friendly, search option/search engine, hyperlinks to other information, information on member facilities, history and profile of the company, ability to obtain information in limited number of pages instead of browsing several pages, option for providing feedback from customers, visitor statistics, and availability of interactive online activities. A systematic analysis procedure for focus group discussion was adopted for analyzing the results. The study, however, suffers from lack of generalizability as the findings from a country where e-commerce is in its infancy stage may not be the same for a country where e-commerce is in an advanced stage.

Keywords

E-commerce websites; Security; Navigation; Website characteristics

Introduction

A website has been termed as the 'window of the world' - the interface on the Internet through which individuals carry out the interaction, sharing and spreading of information, entertainment, research, conducting of various online programs, etc. Based on their scope, the websites can be classified into different categories. One of these categories is an e-commerce website, which provides for buying and selling of products and services online to customers. Examples of such e-commerce websites include eBay, the largest auction store, bdazar.com - a website catering to immigrant Bengalis for handicrafts and food items, O2, a UK based mobile phone retailer, and so on.
There has been limited research in identifying the characteristics of websites that attract customers to shop from online stores or e-commerce websites. Much of the research in this field has been conducted on websites that belong to such categories as search engines, communication, entertainment, data sharing, etc. (Agarwal & Venkatesh, 2002; Chen & Wells, 1999; McKinney et al., 2002; Ranganathan & Ganapathy, 2002; Robbins & Stylianou, 2001/2002). This limited academic literature also indicates that users expect that websites should have differing features based on the category they belong to (Agarwal & Venkatesh, 2002; Zhang & VonDran, 2001). Identification of these categories and introducing them as features in the websites will result in increased visits and browsing of these websites. Based on this notion, it becomes imperative to conduct a research to identify those characteristics/features which online stores must possess.

Literature Review

As stated earlier, limited research has been conducted to identify the characteristics of e-commerce websites. In a cross category study of successful websites using top 40 websites (as ranked by Nielsen NetRatings), Tarafdar and Zhang (2005/2006) by categorizing these websites in 5 categories revealed that for retail websites, security is a prime feature; for financial services, security and customization happens to be important characteristics; for news and information sites, ease of navigation and speed are predominant over other characteristics; and for portals like search engines as well as entertainment websites, usability, information content leading to exciteness, and customization in addition to security have been considered as critical features.

Another study of Olsina et al., (2001) evaluated six websites of universities to determine the characteristics that make these websites attractive to users for browsing. The study revealed that usability as the prime feature of these websites followed by functionality, reliability, and efficiency. Usability has been also cited as a feature by researchers like Choudhury (2006), McKnight et al., (2002), and Park and Kim (2003).

In another study of Abels et al., (1997) cited navigability in terms of design, layout and sequencing as important features for online stores. On the other hand, other researchers (Bailey & Pearson, 1983; Chen & Hitt, 2002; Greer & Murtaza, 2003; Palmer, 2003; Tarafdar & Zhang, 2005/2006) have identified customization or personalization as important characteristics of search engines. Hence, all these studies failed to look into specifically the characteristics of retail stores or e-commerce websites.

From the above discussion, it is apparent that specific research is needed to explore the characteristics of websites for online stores (e-commerce websites). Hence, this study, as an exploratory study, identifies such characteristics of e-commerce websites.

Methodology

Since this is an exploratory study and there has been no such specific research in this field, a focus group approach will be used to gather data. A focus group study is a qualitative approach to research; it is suitable for pilot studies as well as initial studies which require in-depth comprehension of the situation (Krueger & Casey, 2009). It provides the basis for explaining the view and perception of individuals rather than control the answers of respondents by restricting them to selected questions. No previous research in the context of identifying characteristics of e-commerce websites have been done earlier and therefore, a focus group is considered one of the best options for collecting data.

The composition of the focus group should be based on homogeneity (Krueger & Casey, 2009). Care should be taken in mixing individuals so that they understand the topic adequately. Setting up a focus group discussion requires adequate planning by the
researchers. Planning ensures that everyone on the team is aware of the purpose of the study, that the expected outcomes of the study are identified and that the study design matches the available resources (Krueger & Casey, 2009). A focus group study requires carefully planned series of discussion. It aims at obtaining perceptions on a defined field of interest. Krueger and Casey (2009) further state:

_A focus group is not just getting a bunch of people together to talk. A focus group is a special type of group in terms of purpose, size, composition and procedures. The purpose of conducting a focus group is to listen and gather information. It is a way to better understand how people feel or think about an issue, product or service. Focus groups are used to gather opinions._

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Participants are selected because they have certain characteristics in common that relate to the topic of the focus group. The researcher creates a permissive environment in the focus group that encourages participants to share perceptions and points of view without pressuring participants to vote or reach consensus.

Therefore, to choose the participants for the focus group discussion, for convenience, the researchers approach a class of 26 MBA (Master of Business Administration) students at the World University of Bangladesh (WUB). Krueger and Casey (2009) state that focus groups must be homogeneous. The MBA students may have different backgrounds, however, since they were in the middle of the MBA program, and therefore, they have achieved some level of congruency in their thinking process while studying together. Hence, to a great extent they reflect homogeneity (McCole, 2001).

When using focus groups, it is recommended that the number of participants must range between 10 and 12 (Krueger & Casey, 2009). This is because large groups may be uncontrollable and may limit each other's opportunity to share insights and observations. Although the group chosen in this study is large (amounting to 26 participants), the researchers ensured that all participants have a voice in the discussion. The discussions are relaxed and thereby the participants enjoy sharing their ideas and perceptions.

A systematic approach is adopted in analyzing the data obtained from the participants of the focus groups discussion. This approach follows a prescribed, sequential process. The discussion and views of participants are documented and can be clearly articulated (Krueger & Casey, 2009). In this study, the researchers, prior to conducting the discussion, gave a brief introduction of the nature of e-commerce websites but did not specify any such website. Hence, no control was established in terms of choosing specific websites [as has been done in the studies of Olsina et al. (2001) and Tarafdar & Zhand (2006)]. The researchers then, asked all participants to provide a list of the characteristics which the respondents would perceive to be important and essential for these e-commerce websites.

**Analysis and Findings**

A classic analysis strategy of a focus group discussion is adopted to analyze the data. It is a low technology approach that identifies the theme and categorizes the results systematically. Krueger and Casey (2009, p. 120) recommend the following set of questions that need to be answered by the researchers when conducting such a strategy:

**(a) Did the participant answer the question that was asked?**
Here, during the discussion the participants provided a list of the characteristics of the e-commerce websites that were requested by the researchers.

**(b) Does the comment say something of importance about the topic?**
The comments of all the participants in the discussion were all focused to the topic. The researchers ensured that no other issues or side-by-side conversations took place. Hence, all such conversation was recorded in writing.

**(c) Is it like something that has been said earlier?**
The extensiveness that is, how many different people stated the same characteristics was recorded. Recording of the frequency of occurrence of a characteristic is not made as it may happen that the item may have been stated once but its importance in terms of agreement between the group members cannot be evaluated. Again, it may also happen that there may be one person who is a visionary thinker and identify something that no one else has spotted or thought about (Krueger & Casey, 2009). Therefore, the researchers asked the participants to express their agreement by raising their hands or voicing when a characteristic was stated or named in the session of the discussion. Care was taken that the session does not turn into a voting event. When a participant cited an item, he/she was asked to explain the reason for him/her to choose these characteristics. Others in the groups expressed their support by following into the discussion. A time pause was ensured between one discussion and the other. All such discussions were transcribed by the researchers.

Now, the characteristics that were reported during the session of the focus groups discussion are shown in Table 1. The 'YES' denotes the number of people agreeing to the item; 'NO' denoting people who may have disagreed to the item or expressing that they did not accept that such an item as a characteristics of e-commerce websites; and finally, they 'did not say anything' relates to who may have not participated in the event when the consent was being obtained to determine who accepted this item as a characteristics of e-commerce websites or not.

### Table 1: Characteristics of E-Commerce Websites

<table>
<thead>
<tr>
<th>Characteristics of the website</th>
<th>Yes</th>
<th>No</th>
<th>Did not say anything</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Security</td>
<td>26</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2. Appearance</td>
<td>23</td>
<td>X</td>
<td>3</td>
</tr>
<tr>
<td>3. Adequate information about products and services</td>
<td>20</td>
<td>X</td>
<td>6</td>
</tr>
<tr>
<td>4. Speed in downloading the pages</td>
<td>25</td>
<td>1</td>
<td>X</td>
</tr>
<tr>
<td>5. Navigation friendly</td>
<td>22</td>
<td>X</td>
<td>4</td>
</tr>
<tr>
<td>6. Search option/Search engine</td>
<td>23</td>
<td>X</td>
<td>3</td>
</tr>
<tr>
<td>7. Hyperlinks to other information</td>
<td>23</td>
<td>X</td>
<td>3</td>
</tr>
<tr>
<td>8. Information on member facilities</td>
<td>25</td>
<td>X</td>
<td>1</td>
</tr>
<tr>
<td>9. History and profile of the company</td>
<td>20</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>10. Ability to obtain information in limited number of pages instead of browsing several pages</td>
<td>22</td>
<td>X</td>
<td>4</td>
</tr>
<tr>
<td>11. Option for providing feedback from customers</td>
<td>25</td>
<td>1</td>
<td>X</td>
</tr>
<tr>
<td>12. Visitor statistics</td>
<td>15</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>13. Availability of interactive online activities</td>
<td>16</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

**Discussion and Interpretations**

**1. Security**

The overall results have been reported in order of their specificity that is, the emphasis given by the participants to each of the characteristics. Based on the records of transcription of the conversations of the participants, it is observed that the security as a characteristic has been given more importance by the participants. 23 respondents reported more emphasis on this characteristic. Security consists of two dimensions: protection of transactional detail of the customers and privacy of the personal information of the respondents (Choudhury, 2008). The issue of security has been also echoed by researchers
such as Chen (2007), Chen and Barnes (2007), and Corbitt et al. (2003) in studies on trust in e-commerce. Most of these studies have gone beyond to explore whether this feature when prevalent prompted customers to purchase from these websites or not. This study does not go to such an extent and creates scope for other researchers.

Security, although a critical issue, was discussed by the participants of the focus group based on their knowledge of issues reflected in the news and media about privacy violation and loss incurred when transacting online. The participants reported that if security is ensured more customers will opt for inline purchase instead of traditional shopping.

2. Appearance and Adequate Information about Products and Services

On the other hand, the participants to the study gave much importance to appearance as a characteristic compared to product and service information. Previous research (Abels et al., 1997) reported that information content should prioritize over appearance. Park and Kim (2003) also reiterated the issue of product and service information quality in their study on trust in e-commerce websites.

The interpretation of placing more importance on appearance over information about product and service may be the reason of low usage of the Internet on a daily basis in Bangladesh (Hossain, 2000). Low users are likely to be attracted by new features and well designed websites. Not only that, psychologists have revealed that appearance representing good looks is a means of creating good impression in first sight.

In terms of adequate information about products and services, the participants request to have websites with pictures of products being sold in addition to details on product and services. In real life, Dialaphone.co.uk - a UK based online phone retailer, enables its customers to have 3D peek view of all the mobile phones sold through their websites. Studies (Lin, 2007; Park & Kim, 2003) on customer trust have stated that the product information should include the product attributes, consumer recommendations, evaluation reports, etc. to build confidence in the minds of the purchaser. The participants to this study also emphasized such features and stated that e-commerce websites need to be more specific in providing information. This is necessary as it creates social presence- a concept developed by Choudhury (2008) and Gefen and Straub (2004) based on the notion that users of online stores have no ability to touch and feel the products and services in the cyber environment.

In terms of service, after sales service conditions including warranty should be clearly stated. Since, delivery is an integral option in online purchase (Chen & Barnes, 2007), the participants recommended that the terms and conditions must also provide description of services in terms of remedies available to the customer in case delays in delivery and return policies if the item does not meet the standards of the customers.

3. Speed in Downloading the Pages

Speed in downloading webpages is a feature which most of the participants see as an impediment to website access. In Bangladesh, there are the limitations of power failures and disruptions in Internet service due to disconnection from submarine optical fibre. Hence the limitation in low download speed is more common amongst individual Internet users rather than corporate clients. Therefore, the participants recommend for webpage design with content that is easily downloadable with low bandwidth.

4. Navigation Friendly
The participants to the survey stated that navigation friendliness is complementary to appearance of webpages. The low usage rate of the Internet in Bangladesh implies that there are very few people who actually know the tits-and-bits of web browsing. Hence, for them (i.e. the participants), websites which are easy to browse are more appealing then those with advanced features such as link buttons, scroll menus, etc. Some researchers (Spiller & Lohse, 1997; Szymanski & Hise, 2000) point that navigation friendliness is essential ingredient of user interface quality- a component essential for creating relational benefit in online transactions (Choudhury, 2008; Park & Kim, 2003). Navigation friendliness may enable to reduce anxiety of customers when shopping online and aid in smooth decision making (Davis, 1989; Gefen & Straub, 2000; Morris & Turner, 2001; Venkatesh, 2000; Venkatesh & Davis, 2000). The participants in this study, however, did not report such benefits to accrue when navigation friendliness is ensured.

5. Ability to Obtain Information in Limited Number of Pages Instead of Browsing Several Pages

The participants also recommended that in addition to navigation, the information on the websites must be limited to few pages and there must not be any cluttering of too many webpages in the websites. Due to the low bandwidth in Bangladesh, it becomes difficult for some users to go through all these pages. The participants further recommended that clicking on images or any links must have the options of opening small windows with additional information instead of taking them to another webpage.

6. Search Option

The Web consists of information that varies in size, heterogeneity and inconstancy (Furner, 1997). To keep hold of all this information and make it accessible to users and customers, the participants of the focus group recommended for having features for easy searching.

7. Hyperlinks to Other Information

In case the e-commerce websites do not have the necessary information on their websites, the participants recommended having links that can take the users straight to other websites, which can provide this additional information. For instance, eBay.com collaborates with PayPal to conduct the transactions between the seller and the buyer; eBay provides links for users to access additional information including terms and conditions offered by PayPal for processing the transaction.

8. Information on Member Facilities

In trying to understand why the participants' recommended for information for member's service by websites, the researchers found out that some participants want additional perks in the form of discounts arising due to their continuous purchase from the websites. It can be interpreted that the bargaining tendency of Bangladeshi customers prompts them to gain the best price by repetitive arguments with the seller. On the Web, such features are absent as the customers cannot see the seller face-to-face. Hence, one means of gaining advantage in price by the customer is to ask for such perks.

9. History and Profile of the Company

The Internet is a field which creates opportunity for new entrants- absences of entry barriers and low cost operations have made the cyberspace flood with many less reputed online stores. In order to understand the company, users want additional information in terms of history and background profile of the business. Previous studies (Anderson & Weitz, 1989; Doney & Cannon, 1997; Yoon, 2002) stated that such information if provided
on the website creates good reputation in the minds of the customers. The information about good and bad websites spread amongst individuals in the form of informal grapevine of rumours (Choudhury, 2008) and therefore a detail history about the company can serve as a means of promoting the website amongst the customer base.

10. Option for Providing Feedback from Customers

Customer feedback is encouraged so that online stores become customer focused. Obtaining feedback enables the seller to know how he is performing, whether the customers have any issues which need to be straightened up, and to see how customers think of the products and services being sold on the Internet. Customer responsiveness is a component of market orientation (Slater & Narver, 1994), which is an ability of online stores to use and disseminate superior information about customers and competitors to achieve a competitive advantage (Choudhury, 2008).

11. Visitor Statistics

There has been considerable amount of disagreement amongst the participants in terms of introducing the visitor statistics information on websites. Some participants argued that when such counter is introduced into the websites, it creates an impression in the minds of the customer that others are buying from the websites. Others argued that in the initial stage of introducing the visitor statistics in the websites, low visit rates may distract potential customers. It was also observed during the session that some participants actually did not understand the need of such counters and hence did not make any comments.

12. Availability of Interactive Online

When evaluating the reason for introducing additional interactive online activities, it was revealed that the 16 participants who agreed to the feature were users of Facebook- an online networking site. It appeared through the researchers' discussion that some of them were addicted to the services of Facebook and wanted the same in e-commerce websites. The six participants who disagreed stated that such features would contribute to additional costs on behalf of the e-commerce website.

Conclusion

The 13 characteristics identified in this study provide the guideline for online vendors to follow in developing e-commerce websites. A systematic analysis procedure of a focus group study (as suggested by Krueger & Casey, 2009) was used. No instrument was adopted to control the respondents. Nor was the use of any specific websites like previous studies [Olsina (2001); Tarafdar & Zhang, 2005/2006]. In order to ensure validity of the results, the researchers listened to the participants to understand the conditions for free and open sharing of information. Additionally, the researchers observed how they answered and sought clarifications in areas of ambiguity. Hence, the systematic analysis procedure adopted during the discussion warrants for validity of the study (Krueger & Casey, 2009).

On the other hand, the findings of the study are not generalizable because of the use of focus group. However, the study provides an in-depth view into the topic concerned. Since the results of the study are not generalizable, it provides scope for future researchers to test the characteristics in different research settings. Additionally, research could also be done to empirically test which characteristics have more preference to the users.

Another limitation of this study is the use of participants who come from a country which has a low usage rate of the Internet and is in the infancy stage of e-commerce development. Studies on e-commerce (Choudhury, 2008; Chen, 2004; Chen, 2007; Gefen
& Straub, 2003, 2004; Jarvenpaa et al., 2000; Park & Kim, 2003) have been conducted in regions where the respondents find the Internet and e-commerce as a common practice and has achieved an advanced state in operations. It may appear that when this study is conducted in countries with advanced use of the Internet and e-commerce, different features may appear. Therefore, future studies may look into perceptions of respondents in developed countries where e-commerce is in an advanced state.

Footnotes


References


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