Effective UI design Study for E-Commerce Websites

Shivashankar J. Bhutekar^{#1}, Anand A. Ingle^{*2}, Ashvini Bhatkal^{*3} [#]Assistant professor, computer Engineering Department, MGMCET, Mumbai

India

Abstract — The UI design for e commerce websites has become a major success factor for world leading companies in e commerce sector. Our study present the effective techniques and strategy used by the world leading organizations such as amazon, snapdeal, flipkart, tata cliq. This paper also presents the drawback that act as a barrier in customer value chain from customer visitors to customer retention. Due to this phenomenon the e commerce websites goes under 30 % losses because the customer does not find what they want. To find the issues we have identified and analyze the most common areas, features and functions which include latest offers on websites, home page, user's options, navigation and personalized content. The nielsen's criteria for these websites does not matches in de facto standard. Study also focuses on the new development on e commerce website and suggests the organization to implement them

Keywords - *Customer* value chain ,navigation, personalized content , nielsen's criterion

I. INTRODUCTION

The internet has becomes most used by every person in the world due to dramatic research in technology. So the selling and buying of goods and services also increases the customer has a time and a lots of option on a single computer window. Buying of product, services and information which are tangible and intangible called as e commerce, with the use of computer networks mainly the internet(wen et al 2001)

The (cho and park 2001) identifies why the most of the e commerce websites fails to complete the customers' expectations. The e-commerce websites must provide the content loading speed for UI loading on 2G and 4G mobile users. The UI elements on websites must be lightweight and must be supported on many browsers. Nielsen's stated that one third of time customer fails to purchase the product from e commerce website This Problem Can be solved by the engineering solutions. As there is rapid development in e commerce site and mobile app shopper's find it convenient to do it on computer and on mobile app. Cho and park, 2001 stated that "with this rapid development many e commerce sites are still too hard and fails to do on customer's expectation." Such a poor e - commerce website development (Liu et al 2003) Shneiderman argues.

"Designing for experienced frequent user is difficult enough, but designing for a broad audience of unskilled users is a far greater challenge"

This statement also gives some value even today also. The broad audience includes those people which are physically challenged. The e commerce is a organization that interact with its user using a 24* 24 inches windows and the usability is a crucial factor for the successful business of venture (Turban and gehrike 2000)

The finding by many authors are

- 1. Alpher in 2000 says to reduce the cost and improve effectiveness in buying and selling process, website enhancement is important which also projects the corporation image in people mind.
- 2. On a single window the customer willingness to stay, buy, revisit makes crucial impact if the website has been well constructed (Zona research Inc, 2000)
- 3. The first look of website or the use of website makes user to remember the shopping experience for a longer time becomes success factor in e commerce website.

II. E COMMERCE WEBSITE FINDING BASED ON UPON THE USER REVIEW

Jacob Nielsen provides a study column in his paper, where as there are many different interpretations, which can be considered by user Those users which can be categories as per the following

I. Genuine buyer :

These user come for the particular product and sees whether the product is available on website or not. These users are of 75 % and mainly only 30 % of them buys on the site.

II. Margin hunter :

These users are of 20 % among all the users and they do actual buying only 7 % The aim of these buys is to find

the specific product on multiple website with minimum prices.

III. Discounted users:

These users visits the website for special discount. Now a days most of the organizations provides mega sales about 7 % of user the user visits the website and 2 % of the users do actual purchase.

Genuine buyer are the most important what they want must be projected in front of them because they will not waste their time.

III. THEORY OF USER INTERFACE AND FINDINGS

To make e commerce site interactive and increase its usability many author suggested the factors and we have analysed them. About 130 e-commerce site from USA, China Europe and India analysed and studied.

Coopee et al (2000) and cell (2000) provides important factors to make website effective our finding on these are .

Sr. No.	Factors	Users Overall % of satisfac tion in %	User likeliness in %
1.	Category Development	78 %	77 %
2.	User tracking	25 %	20 %
3.	Payment Processing	98 %	90 %
4.	Online fulfilment	68 %	70 %
5.	Website security	88 %	71%
6.	Email promptly and professionally	75 %	79 %

Najjar (2001) also finds important sections that can be analysed for review and evaluation.

Sr. No.	Factors	Users Overall % of satisfac tion in %	User likeliness in %
1.	Navigation	80 %	70 %
2.	Catelog speed	82 %	76 %
3.	Overall page format	70 %	60 %
4.	personalization	85 %	73 %
5.	Customer service	86 %	89 %

IV.FINDING AND ANALYSIS

We have sampled 130 sites (100 %) provides a set of global link to first level pages. The below table

provides navigation to the home page and child pages.

	Simple List	Navigat ion top bar	Menues
Тор	46 (41 %)	47 (60 %)	46 (37 %)
Left	7 (4%)	17 (13 %)	
Right	13 (7 %)	60 (73%)	
Bottom	1 (1%)	66 (55 %)	46 (37 %)

We have also analysed the user response to the content that are presented on website for the user.

- The best practices are listed below
- 1. The location on website for user is seen on about 89 websites.
- 2. Now days today's deal / top trending available on most of the site it has found that about 111 sites has this features.
- 3. Payment processing for buyer has found convenient for 90 % regular buyer on 98 website, for in frequent buyer it was 69 % on 70 websites and for new buyer 25 % on 35 website, there are many cases where user are unable to place order on 17 websites due to not defining the site structure simple as it can.
- 4. About 79 % of websites gives a complete information about their product which is in transits.

V. NEW PROPOSED FEATURES ON E COMMERCE WEBSITE

- 1. About the product there is no link for video description although many you tube users post their first hand review of product ,the visitors should get to watch these kind of video instantly without wasting their time
- 2. User plan to buy a product when he gets a discount on that product but no e commerce site provides this facility, so that the user will be informed later through sms/mail when that product comes for discount.
- 3. The registration or asking for mobile number/mail id act as a barrier for user to buy in our study nearly 23 % of the sites still do the same.
- 4. The 20 % of the sites asks for preregistration on mobile number/mail even the user has not seen product details. Due to this fact the 21 % of the user left the site without buying.
- 5. The hand on experience is also considered important to the user wants to see product experience by hand about 24 % of the user wises to have this facility on the site.

VI. CONCLUSION AND FUTURE WORK

At the end our study provides aspect of e commerce site development for users which act as a superior guideline for new organization. For existing organization there is a scope for improving, serving customer which adds value to the revenue generation process. Keep adding the new features and making user convenient to buy for the product is a essential thing now days.

Some of the necessary features and functions that can be implemented in the website subject to how it can be presented and what is the user interpretation for those features and functions provided on the sites.

The sites from USA, china, Europe and India has a same approach for presenting the content on their site but as per the language and location in respective region makes few menus and category different. Today's websites are making nearly 91 % progress as per the nielsen's criteria towards defacto standard and we have also found the result with adkissons study in 2002

Lastly we would like to make statement

"The aim of UI design should be towards the customer convenience, not towards the organization convenience"

REFERENCES

- Alpher P. "atisfaction with a web Site : Its Measurement, Factors and Correlets ",Retrived March 15 2008 from http://www3.winder.edu/Wolfgram memorialLibeary/Webevaluation/webevel.html.
- [2] Adkisson, H " Identifying De-factio standards for E commerce Web Sites", web link www.hpadikson.com/papers/hpa_thesis_final2.pdf., 2008.
- [3] Clary, B "Browser Detectuion and Cross Browser Support", Retrived From http://developer.mozilla.org/en/docs/browser_Detection_an d_Cross_Browser_Support,2003.
- [4] Dennis Tucker, Chang E Koh, Liu, Shin-Ping, Kappelman, "Standard User Interface in E- commerce Sites ", 2003
- [5] "world internet usage statestics News and population stats", 2007from http://www.internetstats.com
- [6] Cell, B ,"Web Site design : What Do I need to know ?",pennsylvaniaCPA Journal Vol 71 pp 15-17
- [7] Sudweeks, Ess, "Computer-mediated Communication or Culturally mediated computing?", Electronic Journal of Communication. Retrieved May 8, 2008 from http://www.cios.org/www/ejcmain.htm.,1998
- [8] Bentley, J., Julie F., and A. Craig. (2003), "The Importance of Information Design for Small Business Web Sites", A paper for the small enterprise association of Australian and New Zealand 16th annual conference.
- [9] Cyr, D. and Haizley Trevor-Smith. (2004), "Localization of Web Design: An Empirical Comparison of German, Japanese, and US Web site Characteristics", Journal of the American Society for Information Science and Technology, Vol.55, No.13, pp.1199-1208.
- [10] Najjar, L.J. (2001), "E-commerce user interface design for the Web", Retrieved May 8, 2008 from http://www.lawrenceajjar.com/papers/Ecommerce_user_interface_ designfor_ the_Web.html.
- [11] Nielsen, J. (1999), "Web Research: Believe the Data" Retrieved May 10, 2008 from http://www.useit.com/alertbox/990711.html.
- [12] Zona Research, Inc. (2000), "Inside, Outside or Upside Down? Measuring and Ensuring the Efficiency of Web-

Enabled Business Technologies", Zona Market Report, No.38, available at: http://zonaresearch.com/reports/index.htm.

[13] Wen, J.H., Houn-Gee, C., and Hsin-Ginn, H. (2001), "Ecommerce Web Site Design: Strategies and Model", Information Management and Computer Security, Vol. 9, No.1, pp. 5- 12