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Effect of Information Architecture on the Usability of a University Website:
A Comparative Study of Selected Websites of Punjab (India)

Bhim Sain Singla, College of Engineering and Management, Punjabi University Neighbourhood Campus, Rampura Phul-151103, India

Himanshu Aggarwal, Punjabi University, Patiala, India

ABSTRACT

A well-planned information architecture (IA) of a website can enhance the end users' efficiency, learnability, controllability and intention to revisit the site. Its significance is even more in the context of academic websites where the generation, management, and distribution of information are among the major activities. However, it remains a neglected issue as designers of academic websites have overlooked the important aspect of 'intuitive user navigation' and focused primarily on its 'look and feel.' Thus, the current study aims to analyze and compare the effectiveness of information architectural designs of some randomly selected university websites of Punjab (India) through a usability testing technique. For this purpose, the performance metric measured was the information seeking time. The usability session of each subject was captured through Camtasia Studio software. The findings of this study highlight the shortcomings of presently designed academic websites which adversely affect the usability of a website.

KEYWORDS

Information Architecture, University Websites, Usability Testing, Website Usability

1. INTRODUCTION

There has been a tremendous growth in the information and communication technologies (ICT) sector in the last few decades. It has made information widely accessible and available to end users. Many organizations/institutions are focusing on developing appropriate online communication channels for sharing their information. Websites have become essential tools in the dissemination of content in digital format. There was a time when organizations had to follow the conventional practices of brochures and pamphlets to reach their communities. Modern websites have evolved from a collection of simple static web pages to complex sites that offer vast amount of dynamic content and access to numerous different resources/services to their end users. This evolution is mainly attributable to the lack of effective planning for designing websites resulting in unmanageable websites which are difficult for users to navigate. In the information architecture (IA) of a website, the website designers have generally overlooked the important aspect of 'intuitive user navigation' and focused only on its 'look and feel'. Rosenfeld and Morville (2002) have defined information architecture as the structural design of an information space which facilitates in task completion and provides intuitive access to

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content. Dillon (2002), Pai and Lee (2005) and Jallow et al. (2017) have defined it as the process of designing, implementing and evaluating information spaces which are humanly and socially acceptable to their intended stakeholders. Zaphiris et al. (2003) stated that design of IA also affects users' sense of orientation, i.e., to know their navigational trail or where they are in the hierarchy. Moreover, a structured, controlled and user-centered IA ensures that a website provides a rich user experience while continuing to meet the information needs of the business.

Addressing information architecture issues in the area of educational information communication and management is important to enable effective and efficient flow of information from the information providers to the users of such information. Well-planned information architecture has never been as essential as it is now. Its importance has just begun to emerge in the context of websites of higher educational institutions where the generation, management, and distribution of information and knowledge are among the major activities. Increased scope, volume, and format types of information put additional pressure on system design. The ultimate goal of university websites is to make information readily available to their end users for their educational and research needs. The prospective students rarely revisit a university site, if the requisite information is too convoluted to comprehend in their initial visit. The right information architecture of a site provides an incredible user experience that helps in gaining or retaining visitors. Figure 1 displays the conceptual framework of university websites describing that the effectiveness of communication channel between information provider and users depends largely on its information architecture.

For the purpose of this study, information architecture has been considered as systematical categorization of information, absence of deep architecture, placement of important information in a paragraph/file, menu headings, structure of online forms, and optimum use of images. In order to develop a successful IA, it is necessary to understand end users' traits and the frequently performed varied actions by them while visiting the website. This investigation is vital to ensure that users find the required information efficiently and effectively without wasting their precious time. The heterogeneous group of end users as shown in Figure 1 have diverse requirements such as (a) functional requirements, e.g., how the online fee payment can be made for a specific course; (b) informational requirements, e.g., what are the courses offered by the institution and their fee details; (c) structural requirements, e.g., knowing about the name of controller of examination.; and (d) spatial requirements, e.g., how to go to a particular webpage or location from the current location. Thus, it is of great significance to study the impact of information architectural designs on the usability of a university website through the perception of its end users.

Figure 1. Conceptual framework showing the relationship between a university website architecture and information exchange