Evaluating the Content Quality of Library Website of Panjab University, Chandigarh

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Abstract

In technotimes, World Wide Web has emerged as a crucial platform for academic libraries to interact with and provide resources to their patrons. Despite the growing number of academic libraries establishing their online presence, there still remains a notable absence of authoritative and standardized guidelines for assessing the quality of library websites. As a result, library professionals over and over again face difficulties in systematically evaluating and refining the quality of library website to meet user expectations. To overcome this key limitation, the present study validates a structured tool for measuring the content quality of library websites. The research evaluates the content quality of library website of Panjab University, Chandigarh through a user-centered approach. The results reveal significant disparities among users' perceptions of content quality of library website based on gender and age groups. The study contributes to the ongoing discourse on services provided through the library websites by providing useful perspectives and a validated tool for refining the quality and user experience of using academic library websites.
Keywords: Library Web Site, Website content quality, Web Site Evaluation, Website Quality

Introduction

In the modern era of information explosion, Information Communication Technology (ICT) has become vital for dissemination of information worldwide. Making sure that the information is delivered to users in a user-friendly and accessible manner is of utmost importance. Among the various technological innovations, the World Wide Web (WWW) stands out as the most commonly used interface for information dissemination. With the advancement of Internet technologies, websites have emerged as key tools for providing a wide spectrum of information. Accordingly, institutions are increasingly using websites as key platforms for imparting information with their users (Kaushik, 2015). Libraries, often regarded as the backbone of educational institutions, use their websites as gateways to their resources and services (Devi & Verma, 2017). Nowadays, library websites are regarded as a crucial part of a library's identity (Connell, 2008) through which libraries provide various services to its patrons. Especially, the usage and importance of library websites in the past few years have gone through a huge escalation. A library website must offer a systematized and well-organized user experience in order to be effective and should also be current, easy to use and user friendly. A library website should ideally make it simple to access important information such as mission of library, history, number of books,

hours of operation, and services offered. Thus, an effective information presence on website is vital for libraries to promote and showcase their collections and services to the broader community.

In technotimes, as the dependence on web increases day by day, evaluating the quality of library websites has become increasingly important. And for that, view of users about the library websites serve as a critical tool for identifying areas of improvement. The day by day growth of Web has necessitated the development of new frameworks for assessing the quality of websites. Traditionally, library quality was measured primarily by the extent and richness of physical collections (Sheikh, 2014). Today, for evaluation of library website, there are many frameworks that consider multiple dimensions, including service quality, user satisfaction, usability, and content quality (Dominic & Jati, 2010). Thereby, users now serve as primary judges of library quality (Nitecki, 1996). In this digital and competitive environment, academic libraries face significant challenges arising from both technological advancements and changing user expectations. Consequently, it is crucial for library professionals to understand the evolving needs and preferences of their users.

The goal of the study is to evaluate the content quality of library websites only based on a user-centered framework, utilizing a checklist of specific parameters. As users' perceptions are crucial for accurately assessing website quality. While many studies have previously examined the quality of library websites from both user and professional perspectives, a considerable proportion of such research has been conducted outside India. To address this gap, the current study focuses on evaluating the content quality of library website of Panjab University, Chandigarh.

Literature Review

Kalra and Verma (2011) conducted a study titled *"*Evaluation Indicators of Library Websites of Selected Research Institutions in India" to evaluate the websites of 46 research institution libraries through both quantitative and qualitative methods with the help of web impact factor, checklist of indicators which highlights usability and usefulness factors. The study's results indicated that techniques for library website evaluation practices in India are relatively less compared to international standards. It emphasized the importance of adopting user-centric design, refining content quality, and ensuring regular website updates. The researchers also recommended that vigorous involvement of library professionals can significantly help institutions to increase the user experience on library website.

Gharibe and Kamran (2016) in their study titled "Evaluating Iranian State University Websites Using WebQEM" evaluated 100 websites of Iranian state universities. They employed the Web Quality Evaluation Method (WebQEM) and used a combination of a detailed survey and the Delphi technique for

analysis. A checklist developed by Olsina et al. (1999) was used to collect data from ten experts, including information professionals, web administrators, designers, and evaluators. The study found that the university websites did well in three out of four key areas—reliability, efficiency, and functionality—while usability was rated as average and concluded that, overall, Iranian state university websites were in reasonably good condition.

Irawan and Hidayat (2022) in their study titled "Evaluating Local Government Websites Using a Synthetic Website Evaluation Model" aimed to develop a synthetic model for assessing ten local government websites in East Kalimantan. The proposed model consisted of two key dimensions such as technical performance and democratic deliberation. Data analysis was carried out using SortSite 5.3.5 software. The findings revealed that while the websites showed relatively strong performance in upholding democratic principles—such as content quality, transparency, and communication whereas they lagged in technical aspects, particularly in accessibility and of errors. Hence, the overall quality of the websites was considered fairly well, although improvements in accessibility and technical standards were suggested.

Adams and Cassner (2008) in their study titled "Content and Design of Academic Library Websites for Distance Learners" analysed how academic libraries support distance learners through their library websites. The study focused on evaluating the websites member libraries of Association of Research Libraries (ARL), but only 48 out of 123 libraries met the criteria. The researchers assessed various aspects such as usability, accessibility, and the availability of services especially for distant learning. Content aspects like mission statements, contact information, and access to resources, in addition to design features including navigation menus, font styles, and hyperlinks were evaluated. The findings revealed that some libraries offer good support to distance learners by providing essential services online. The study offers valuable insights for library administrators and web developers aiming to provide services for distant learners.

Dominic and Jati (2010) in their study titled "Evaluation Method of Malaysian University Website: Quality Website Using Hybrid Method" employed online web-diagnostic tools to assess the quality of university websites in Malaysia. The checklist covered a broad set of parameters, including website traffic, loading speed, response rate, page ranking, update frequency, overall size, number of items, accessibility, code validation, and the presence of broken links. The results demonstrated that the overall quality of Malaysian university websites was relatively low, with 80% of the examined websites having broken links. Researchers highlighted the significance of adhering to established web design principles and recommended that developers consider multiple key factors while creating websites.

The literature search addressed to the fact that library websites have a great deal of potential for showcasing their materials and offerings to users. The researcher discovered that, majority of studies were conducted outside India in order to determine the quality of library websites. Thus, there is a lack of information about an assessment of the Content quality of library websites. Very few researches have assessed the quality of Indian university libraries' websites. As a result, a thorough investigation is required to close the knowledge gap about the evaluation of the Content quality of the university library websites in India.

Objectives
The objective of the study was to evaluate the content quality of library website of Panjab University, Chandigarh.

Scope and Limitation of the study
Since the objective of the present study was to analyse the content quality of the library Website of Panjab University, Chandigarh, research was geographically limited to Panjab University, Chandigarh only.

Methodology
The goal of the study was to assess the content quality of the library website of Panjab University, Chandigarh. A checklist was designed for data collection and for evaluating the content quality of the library website based on the literature review. The postgraduate students and research scholars were the primary participants of the study.
The data was gathered through questionnaire comprising various checkpoints for measuring library website content quality. The data collected was entered, coded and analysed in MS-Excel spread sheet and SPSS 23 (Statistical Package for Social Science) tool.

Universe of the Study
The study was limited to Panjab University, Chandigarh only as the universe of the study. Panjab University has a well-established library website. The data was collected from the post graduate students and research scholars of the universities. The total number of post graduate students and research scholars in Panjab University were 8420 (as per the National Institutional Ranking Framework 2019). Out of the entire population of 8420, a sample of 150 users [post graduate students (75) and research scholars (75)] was selected.

Data Analysis and Interpretation
On the basis of prepared checklist, data was collected from the Postgraduate students and Research scholars of Panjab University. A total of 200

questionnaires were distributed among the students, out of which 157 were received back, out of which only 147 were complete. Table 1 shows the distribution of users according to their gender and age. As evident from the above table that out of 147 responses, 47.61% respondents were male and 52.39% were female. Around 75.51% (111 out of 147) respondents belonged to the age group of 20–25 years, followed by 24.49% (36) respondents from the age group of 26–30 years.

Table 1: Distribution of users

Categories	Respondents	Frequency	Per cent
Gender	Male	70	47.61
	Female	77	52.39
Age	20-25	111	75.51
	26-30	36	24.49

Gender wise analysis of Content Quality of Library Website of Panjab University

Table 2 shows the gender wise analysis of the content quality of library website. With the combined scores of strongly agree and agree, a large majority of users from both genders (80.2% to 82%) find up-to-date information on library website. More than 73% respondent from both genders (73.5% to 74.7%) find information presented on the library website in a sequential manner. Over 44% respondents from both categories stand neutral for the question about multilingual option available on the library website. Further, over 63% respondents from both genders affirmed that the library website has used variety of multimedia forms, such as text, audio, video, etc. Furthermore, over 82% respondents from both genders find the content on the website of their library useful. A mixed response was observed from both categories regarding the completeness of the content on the library website. However, 94.4% respondents from male category and 94.2% respondents from female category believe that the website of their library has clear and readable content. 94.3% respondents from both categories remarked that the library website is error-free. Over 87% respondents from both genders find that the library website offers comprehensive information. Almost 100% respondents from both categories find the links of the library website operational, relevant and appropriate.

No statistically significant differences were found between Male and Female perceptions of website currency (χ^2 = 4.492, p =.106), presentation of information (χ^2 = 1.792, p =.617) and comprehensiveness of content (χ^2 = 1.033, p =0.793). Further, statistically significant differences were found between Male and Female perceptions of multilingual option, multimedia, usefulness, completeness, readability, website link appropriateness and accuracy of content (p <=0.05). Despite these disparities, the overall findings

specify a relatively consistent user experience between genders, which are well-matched with the primary goal of the current study, which is to evaluate library website content quality.

Table 2: Gender wise Analysis of the Content Quality of Library Website

Content	Response	Gender				Chi-Square Test
		Male		Female		
		No.	%	No.	%	
Up-to-date information on website	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 4.492 p= 0.106
	Disagree	0	0.0%	0	0.0%	
	Neutral	185	19.7%	135	18.0%	
	Agree	347	37.0%	251	33.6%	
	Strongly agree	405	43.2%	362	48.4%	
Information is presented in a sequential manner	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 1.792 p= 0.617
	Disagree	37	3.9%	36	4.8%	
	Neutral	200	21.3%	160	21.4%	
	Agree	345	36.8%	288	38.5%	
	Strongly agree	355	37.9%	264	35.3%	
Website has a Multilingual option	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 16.775 p= .001
	Disagree	307	32.8%	234	31.3%	
	Neutral	420	44.8%	342	45.7%	
	Agree	28	3.0%	52	7.0%	
	Strongly agree	182	19.4%	120	16.0%	
Website has variety of mixed forms (i.e. text, audio, video, etc.)	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 9.515 p= .009
	Disagree	0	0.0%	0	0.0%	
	Neutral	288	30.7%	277	37.0%	
	Agree	500	53.4%	380	50.8%	
	Strongly agree	149	15.9%	91	12.2%	
Content of library website is useful	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 12.439 p .006
	Disagree	1	.1%	0	0.0%	
	Neutral	113	12.1%	131	17.5%	
	Agree	588	62.8%	460	61.5%	
	Strongly agree	235	25.1%	157	21.0%	
Content of library website is complete	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 14.311 p= .001
	Disagree	0	0.0%	0	0.0%	
	Neutral	387	41.3%	378	50.5%	

Content	Response	Gender				Chi-Square Test
		Male		Female		
		No.	%	No.	%	
	Agree	315	33.6%	213	28.5%	
	Strongly agree	235	25.1%	157	21.0%	
Content of library website is clear/readable	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 17.907 p= .0001
	Disagree	0	0.0%	0	0.0%	
	Neutral	53	5.7%	43	5.7%	
	Agree	533	56.9%	497	66.4%	
	Strongly agree	351	37.5%	208	27.8%	
Content of library website is accurate (no spelling, grammar errors)	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 5.146 p= 0.076
	Disagree	0	0.0%	0	0.0%	
	Neutral	54	5.8%	43	5.7%	
	Agree	604	64.5%	519	69.4%	
	Strongly agree	279	29.8%	186	24.9%	
Content is explored in depth	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 1.033 p= 0.793
	Disagree	1	.1%	0	0.0%	
	Neutral	119	12.7%	95	12.7%	
	Agree	442	47.2%	345	46.1%	
	Strongly agree	375	40.0%	308	41.2%	
Website's link is relevant, appropriate, comprehensive and operational	Strongly disagree	0	0.0%	0	0.0%	$\chi^2=$ 9.809 p=.007
	Disagree	0	0.0%	0	0.0%	
	Neutral	4	.4%	1	.1%	
	Agree	512	54.6%	463	61.9%	
	Strongly agree	421	44.9%	284	38.0%	

Age wise analysis of Content Quality of Library Website of Panjab University

Table 3 shows the age wise analysis of the Content quality of library website. With the combined scores of strongly agree and agree, a large majority of users from both age groups (76.3% to 82.5%) find up-to-date information on library website. More than 66% users from both age groups (66.3% to 76.8%) find information presented on the library website in a sequential manner. Over 29% respondents from both age groups (29.3% to 41.3%) feel that they can't read the content available on the library website in more than one language. Further, over 62% respondents from both age groups affirmed that the library website has used variety of multimedia forms, such as text, audio, video, etc. Furthermore, over 80% respondents from both age groups find the

content on the website of library useful. Over 52% respondents from both categories thinks that content on the library website is complete. However, 94.7% respondents from 20-25 age group category and 93.1% respondents from 25-30 age group believe that the website library has clear and readable content. Over 93% respondents from both age groups remarked that the library website is error-free. Over 83% respondents from both age groups find that the library website offers comprehensive information. Almost 100% respondents from both age groups find the links of the library website operational, relevant and appropriate.

No statistically significant differences were found between the age group (20-25) and (25-30) perceptions of website link appropriateness (χ^2 = 3.742, p =.154). Further, statistically significant differences were found between both age groups perceptions of information currency, presentation, multilingual option, multimedia, usefulness, completeness, readability, comprehensiveness and accuracy of content (p <=0.05). These results reveal that while website link appropriateness is viewed similarly across different age groups whereas other content-related features are perceived differently. Importantly, the results also indicate a consistent user experience across age groups, aligning with the objective of this study—to assess the content quality of library websites.

Table 3: Age wise analysis of Content Quality of Library Website

Content	Response	Age				Chi-Square Test
		20-25		25-30		
		No.	%	No.	%	
Up-to-date information on website	Strongly disagree	0	0.0%	0	0.0%	χ^2= 11.121 df= 2 p= .004
	Disagree	0	0.0%	0	0.0%	
	Neutral	225	17.5%	95	23.8%	
	Agree	450	35.0%	148	37.0%	
	Strongly agree	610	47.5%	157	39.3%	
Information is presented in a sequential manner	Strongly disagree	0	0.0%	0	0.0%	χ^2=43.328 df= 3 p=.0001
	Disagree	51	4.0%	22	5.5%	
	Neutral	247	19.2%	113	28.3%	
	Agree	537	41.8%	96	24.0%	
	Strongly agree	450	35.0%	169	42.3%	
Website has a Multilingual option	Strongly disagree	0	0.0%	0	0.0%	χ^2=41.580 df= 3 p= .0001
	Disagree	376	29.3%	165	41.3%	
	Neutral	634	49.3%	128	32.0%	
	Agree	51	4.0%	29	7.3%	

Content	Response	Age				Chi-Square Test
		20-25		25-30		
		No.	%	No.	%	
	Strongly agree	224	17.4%	78	19.5%	
Website has variety of mixed forms (i.e. text, audio, video, etc.)	Strongly disagree	0	0.0%	0	0.0%	χ^2=26.573 df= 2 p= .0001
	Disagree	0	0.0%	0	0.0%	
	Neutral	416	32.4%	149	37.3%	
	Agree	711	55.3%	169	42.3%	
	Strongly agree	158	12.3%	82	20.5%	
Content of library website is useful	Strongly disagree	0	0.0%	0	0.0%	χ^2=26.502 df= 3 p= .0001
	Disagree	1	.1%	0	0.0%	
	Neutral	166	12.9%	78	19.5%	
	Agree	842	65.5%	206	51.5%	
	Strongly agree	276	21.5%	116	29.0%	
Content of library website is complete	Strongly disagree	0	0.0%	0	0.0%	χ^2=11.445 df= 2 p= .003
	Disagree	0	0.0%	0	0.0%	
	Neutral	607	47.2%	158	39.5%	
	Agree	402	31.3%	126	31.5%	
	Strongly agree	276	21.5%	116	29.0%	
Content of library website is clear/readable	Strongly disagree	0	0.0%	0	0.0%	χ^2=6.669 df= 2 p= .036
	Disagree	0	0.0%	0	0.0%	
	Neutral	68	5.3%	28	7.0%	
	Agree	807	62.8%	223	55.8%	
	Strongly agree	410	31.9%	149	37.3%	
Content of library website is accurate (no spelling, grammar errors)	Strongly disagree	0	0.0%	0	0.0%	χ^2=10.435 df= 2 p= .005
	Disagree	0	0.0%	0	0.0%	
	Neutral	69	5.4%	28	7.0%	
	Agree	883	68.7%	240	60.0%	
	Strongly agree	333	25.9%	132	33.0%	
Content is explored in depth	Strongly disagree	0	0.0%	0	0.0%	χ^2=20.250 df= 3 p= .0001
	Disagree	1	.1%	0	0.0%	
	Neutral	146	11.4%	68	17.0%	
	Agree	582	45.3%	205	51.3%	
	Strongly agree	556	43.3%	127	31.8%	
Website's link	Strongly disagree	0	0.0%	0	0.0%	χ^2=3.74

Content	Response	Age				Chi-Square Test
		20-25		25-30		
		No.	%	No.	%	
is relevant, appropriate, comprehensive and operational	Disagree	0	0.0%	0	0.0%	2 df= 2 p= 0.154
	Neutral	4	.3%	1	.3%	
	Agree	760	59.1%	215	53.8%	
	Strongly agree	521	40.5%	184	46.0%	

Findings

The main findings of the study are summed up below:

- It was evident from the data collected from both genders that majority of users find up-to-date information on library website.
- More than 73% respondent from both genders find information presented on the library website in a sequential manner.
- Over 44% respondents from both categories stand neutral for the question about multilingual option available on the library website.
- More than 63% respondents from both genders affirmed that the library website has used variety of multimedia forms, such as text, audio, video, etc.
- More than 82% respondents from both genders find the content on the website of their library useful.
- A significant percentage of respondents (94.4%) from male category and 94.2% respondents from female category believe that the website of their library has clear and readable content.
- Over 94% respondents from both categories remarked that the library website is error-free.
- More than 87% respondents from both genders find that the library website offers comprehensive information.
- Almost 100% respondents from both categories find the links of the library website operational, relevant and appropriate.
- A large majority of users from both age groups (over 76%) find up-to-date information on library website.
- More than 66% users from both age groups find information presented on the library website in a sequential manner.
- Very few respondents from both age groups (29.3% to 41.3%) feel that they can't read the content available on the library website in more than one language.
- More than half percentage of respondents (over 62%) from both age groups affirmed that the library website has used variety of multimedia forms, such as text, audio, video, etc.
- A significant majority of respondents (over 80%) from both age groups find the content on the website of library useful.

- More than half percentage (52%) respondents from both categories thinks that content on the library website were complete.
- However, a good majority of respondents (94.7%) from 20-25 age group category and 93.1% respondents from 25-30 age group believe that the website library has clear and readable content.
- Over 93% respondents from both age groups remarked that the library website is error-free.
- A significant majority of respondents (83%) from both age groups find that the library website offers comprehensive information.
- Approximately, a full majority of respondents from both age groups find the links of the library website operational, relevant and appropriate.

Conclusion

The World Wide Web has become one of the most powerful platform for academic libraries to provide services to their patrons. This study systematically created a practical tool for evaluating the content quality of library website of Panjab University, Chandigarh. The tool developed through this research can be effectively used for the development, evaluation, and maintenance of content quality standards in academic library websites. The findings from this study clearly indicate that users across both gender and age groups generally have a positive perception of the content quality of Panjab University library website. Results suggest that website of Panjab University library is successfully meeting user expectations in key areas of website content, supporting the objective of the study of assessing content quality without emphasizing demographic differences. However, areas like multilingual accessibility could be improved to better help a more diverse user base.

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