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Evaluation of Internet-based resource by the undergraduates: a case study at University of Peradeniya

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Introduction

The web offers incredible opportunities to student researchers, because it makes a superfluity of material readily accessible which is convenient to use, but the web also has its own pitfalls. Search Engines are generally the starting point of student information seeking process (Doyle and Hammond 2006), but there are many concerns as these authors point out; the order in which the search engine rank the sites does not necessarily portray their reliability because of the mechanisms used to rank the sites. Daqing *et al.* (2011) also stated that the Internet-based resources are often ranked high by paying a fee or being frequently accessed. The credibility of the content of most web sites does not have any guarantee unless the traditional criteria of authority, objectivity, and sponsoring institution are used to making judgments of the quality of the web sites (Alexander and Tate 1999). Therefore, it is vital to guide the students in using Internet-based resources. Many studies have been carried out to determine how users from different populations evaluate web sites. The evaluation of Internet-based resources is of the utmost importance. (Doyle and Hammond 2006, Li 2006, Tillotson 2002). As undergraduates are relatively inexperienced in online searching, it is important to study their information seeking behavior in the digital age to better support them. As the studies on the information seeking behaviour of the undergraduates of Sri Lanka are limited, a university-wide survey was carried out to fill this gap in 2013 at University of Peradeniya, and this paper presents the finding of one aspect of the major study.

Objectives

The objectives of this paper are to 1) to present the criteria used by the undergraduates to evaluate internet-based resources, 2) to analyze and interpret these criteria based on the previously published research outcomes, and 3) to make recommendations to improve their evaluation behavior on internet-based resources.

Methodology

This study covered the disciplines of Agriculture, Arts, Engineering, Health Sciences[3] and Science taught in seven faculties[4] of University of Peradeniya. An online questionnaire used by Head and Eisenberg (2009) was revised to suit the Sri Lankan context and administered as a printed questionnaire. This instrument was considered because, it is comprehensive, its content and construct validity has already been established by Head and Eisenberg (2009 and 2010) and a

[3] Health Science includes the Faculties of Allied Health Science, Dental Science, and Veterinary Medicine and Animal Science.

[4] Faculty of Medicine was not considered as the responses were not adequate to continue the research.

pilot survey conducted in 2010 by the researcher proved its usability in the Sri Lankan context. The original survey instrument contained two components; academic research and everyday life research, which takes almost one hour to complete, therefore the component on everyday life research was omitted. Part I of the original instrument was adapted with a few terminological changes and six new questions were added to survey the access to computers by the undergraduates and training they receive in using the Internet / Library.

A sample of 10% of the second, third and fourth year students were selected from seven faculties using Stratified Random Sampling method and the total sample was 460 undergraduates. Questions covered the demographic characteristics on the year of study, faculty, department, Grade Point Average (GPA) of previous year, age, and gender of the respondents, the information resources they use. Secondly, Criteria used to evaluate the resources, people they consulted for help with evaluations, their research practices, use of productivity tools, objectives of doing a course-related research paper, and difficulty of research related information tasks were also studied. Further, information about the places where they access computers, and the training they received was also gathered.

While some questions received straightforward answers some questions yielded 7 point Likert type responses (Almost Always, Often, Sometimes, Rarely, Never, Do Not Know and No Experience). The response categories "Almost Always" and "Often" were conflated into a new category of "Often" and this category was used to present the findings of this paper. Numeric expressions were made in percentages and since the survey results discuss the human behavior, use of decimal points in expressing the findings was avoided.

Head and Eisenberg (2010) have identified three criteria for evaluating digital resources and the same was used to analyze and interpret the findings:

1. Traditional standards of timeliness and authority (use of publication date, credentials of the author, meaning of the URL and librarians recommendations),
2. Domain specific standards (reliability, authority, and credibility of the content),
3. Self-taught standards (methods acquired from friends, classmates or other informal contacts, availability of vital information in charts). According to the authors, these criteria tend to be personal and qualitative.

Findings

The total number of responses was 363 (79%), of which, 55% were in the age group of 21-23 years, 39% in the age group of 24-26 years and others were over 26 years. Of the respondents, 56% were female while 44% were male and 39% has obtained GPA of 3.0-3.5 and 20% has obtained 3.6 or above in their previous academic year. Respondents confirmed that they mainly use two types of Internet-based resources; Search Engines and Wikipedia. Table 1 presents the discipline-wise use of Internet-based resources. While Table 2 summarizes the criteria used to evaluate the Internet-based resources, Figure 1 illustrates the percentage of the criteria used graphically.

Table 1- Use of Internet-based resources

Discipline	Search Engines	%	Wikipedia	%
Agriculture	64	96	49	73
Arts	69	66	52	50
Engineering	69	68	55	54
Health Science	40	61	56	50
Science	20	83	20	83
Total	**262**	**72**	**232**	**64**

Table 2 - Criteria used by undergraduates to evaluate Internet-based resources

Evaluation Criteria	Agriculture	Arts	Engineering	Health Science	Science	Total	%
1. How current the Web Site is.	42	63	64	37	20	226	62
2. Web site author's credentials	19	29	29	13	9	99	27
3. Content acknowledges different viewpoints	24	38	49	14	11	136	37
4. Web site gives credit for using someone else's ideas.	18	36	37	13	5	109	30
5. Consider what the URL mean	23	40	33	17	6	119	33
6. Web site has links to other resources on the Web.	29	39	48	21	14	151	42
7. Web site has bibliography.	14	26	19	10	3	72	20
8. Availability of vital information in charts	40	57	55	29	12	193	53
9. A librarian recommended using the Web site.	9	14	21	8	4	56	15
10. I have heard of the Web site before.	32	41	64	29	12	178	49
11. I have used the Web site before.	32	49	60	39	12	192	53
12. Web site's design tells me it is a legitimate site.	20	27	39	20	12	118	33

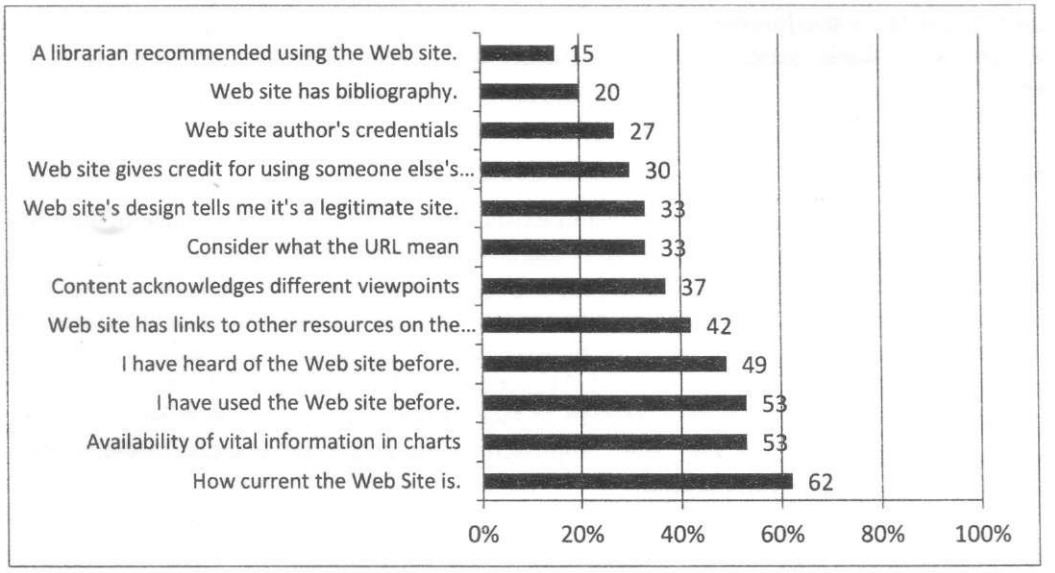

Figure 1 - Criteria used by undergraduates to evaluate Internet-based resources

Findings established that overall evaluation of the Internet-based resources is done only by 62% even though a total of 72% have claimed (Table 1) that they use search engines. This indicates that not all those who use search engines evaluate the quality of the material they retrieve. Detailed findings (Figure 1), discloses that, the criterion used by the majority is the currency of the website (62%) which is categorized by Head and Eisenberg (2009) as a traditional standard, therefore acceptable. However, the second and third often-used criteria are the availability of vital information in the charts [and illustrations] and the previous use of website (53%) and whether they have previously heard of the website (49%). These are not standard criteria used for evaluation but self-taught methods according to Head and Eisenberg (2009). This indicates that more students remain within a comfort zone when they are using internet-based resources. More traditional and accepted criteria like, author's credentials (27%), meaning of the URL (33%) are used only by lesser percentages.

Discussion

The major study revealed that the undergraduates are not given adequate training in using the Internet. The training given to the undergraduates is limited to a 45-60 minute orientation programme and a tour of the library, conducted when they enter the faculty. Of all the respondents, 52% commented that they have not received any training in using Internet and 57% commented that they would like to receive such training. Further, the major study established that 68% of the undergraduates, approach their classmates to seek assistance with evaluating the Internet- based resources. This is higher than the percentages, which consult their lecturers (59%) or librarians (20%).

Conclusion

Findings established that even though the majority of respondents use Internet and Wikipedia, they do not evaluate the Internet-based material adequately and even when they evaluate, they use self-taught standards rather than traditional standards. It is academically not recommended for the

undergraduates to use Internet and Wikipedia, without evaluating the material using the accepted, recognized methods, seeking assistance mainly from their classmates whenever they need any help.

Recommendations

It is obvious that a significant relationship exists between training and the use of Internet-based information resources and services. It is therefore desirable that adequate emphasis should be given to develop adequate information skills among users through information literary programmes. Further, it is strongly recommended that the librarians offer continuous training in evaluating Internet-based resources to undergraduates, without further delay. If the time is a constraint, due to the already overcrowded timetables and course work, alternative methods could be adopted to deliver the training, instead of face-to-face training, i.e. distribution of brochures, adding guides to the library web pages, approaching students through social media etc. and small group training upon special requests.

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