

Student reactions to online tools for learning to use the Internet as a study tool: Outside the comfort zone?

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The Internet is a valuable source of health related information, however students are not maximising their use of this resource. A study was undertaken to see what resources were already available to help them develop the necessary skills, and to identify the elements of an Internet study guide that were of importance to the students. An extensive search of the Internet, using a variety of search terms in Google and Yahoo located numerous study support sites.

Ten focus groups were held with a total of 60 students on a variety of health and social care related courses at an English university. Rather than finding what the students were looking for in an online study guide the research found that using an online support system took the majority of students outside of their comfort zone, resulting in them rejecting online support and expressing a preference for personal or hard copy support and materials.

The way online materials are structured into courses is explored as a possible reason for these difficulties and a flow chart to help students identify resources is presented.

Keywords: online, internet, references, information literacy

Introduction

The Internet can be an excellent study resource, and is increasingly being used by higher education students in the health and social care areas. The major disadvantage of using Internet based resources is the problem of locating good quality information from within the vast amount of information available.

Various studies have found that students have poor Internet skills. Bond (2002) found that nearly half (48%) of new pre-registration nursing students at an English university felt that they ended up with too much information when searching on the Internet. O'Hanlon (2002) found that freshmen at an American university had poor skills in both searching and evaluating web sites. A survey into the use of the WWW by students at an English university (Slaouti 2002) found that 13% (mainly undergraduates) made no use of the WWW for academic study. Lazonder (2000) found that novice Internet users' ability to locate websites could be improved by helping them to develop more advanced skills, eg monitoring their search results to improve their search performance.

Once students have found information on the web, Wood (2004) asserts that they lack the skills to critically analyse the information they have found, making the assumption that 'all information is equal, truthful, and has the same value'. He also found that students do not understand or appreciate the reasons for, and necessity of, accurately crediting the information source.

Students need an understanding of the Internet and the services it supports, and the skills to undertake effective searches and evaluate the results. Evidence, however, shows that they are not starting higher education courses equipped with these skills. O'Hanlon (2002) further recommends that not only should students be taught Internet skills, but that the skills should be refreshed throughout the course.

Research aims

There were two main aims of this project. One was to identify the resources available to help students develop the skills that they will need to be able to effectively use the Internet as a resource during their studies. The second was to identify the elements of a study guide that were important to students and produce a tool to help them select appropriate sources of guidance.

Methods

Identification of resources

Structured Internet searches were carried out through Google and Yahoo to locate web based tutorials and information sites. The search terms used were:

- Learning
- Internet
- Study
- Tool
- Resources
- Student
- and synonyms of these words

The 'exact phrase' option was also used with the terms:

- Internet as a study tool
- Internet study tool
- Evaluating Internet resources
- Appraising Internet resources

Online catalogues of major publishers were also searched to identify hard copy study guides.

Commercial software packages were excluded from the research partly due to the cost of obtaining a selection of the packages for testing, but more importantly because of the limited availability of these for students, who at most may have access to one package if it is supplied by their university.

Student views of essential requirements

As this research was carried out with students currently on courses within the researchers' institution, the ethical considerations included making sure that no student felt pressurised into participating in the research and assuring anonymity. Considering the ethical position it was felt that focus groups would be a more preferable mechanism than interviews as students would always have the presence of their peers for support. No students declined the invitation to participate, and several commented positively about being asked about what they wanted.

Focus groups were the preferred method of gathering student views as it was hoped that within each group there would be a mix of experience and skills, and that students could use other peoples' ideas to help them develop their own. It was hoped that each group would be able to find some degree of consensus from the developing discussion. Groups were identified from as many courses as practical. The actual sampling was pragmatic, as only groups who were attending sessions at the university when the focus groups were scheduled were included.

In total 10 focus groups were held with students in a health and social care faculty. A total of 60 students (min group size 4 max group size 10) participated in the research. The students involved represented academic levels C, I and H; and a wide range of experience, including students in the first few days of their course, to students in their final year; students on pre-registration nursing; post registration nursing; BSc Health Studies; BA Social Work and BA Health and Community Development courses.

Skill levels and prior use of the Internet varied widely across the participants with most of the groups having a mixture which helped to stimulate discussion. A semi-structured approach was adopted, with students being encouraged to discuss thoughts and suggestions that arose from the answers to the questions as well as to add anything that wasn't covered in the questions.

Results

Available resources

In surveying the range of resources available to students wishing to learn how to use the Internet as a study tool, a number of categories emerged into which the majority of resources could be placed. The following category definitions, and their accompanying discussions, were based upon the evaluation of sites found using both a search engine (Google) and a directory (Yahoo). In each case, searching strategies were employed that attempted to mimic those used by web users of varying degrees of competency and experience, so that some sites were discovered 'easily', whilst others required more thorough, thoughtful searches. The importance of this to the overall evaluation of a resource is discussed later.

Category 1 – University/college library and affiliated services

By far the most prevalent type of resource, and indeed the one most likely to be encountered by inexperienced web users performing basic searches, is that produced by educational institutions, primarily for internal use by their own students.

Category 2 - 'Academics' pages

The second type of resource is related to the first, but rather than being the product of a centralised, 'official' outlet for research information within a university, consists instead of information produced independently by academics, still provided for student use, and often located on an institution's servers.

Category 3 – Government/institution funded resources/initiatives

Perhaps the most comprehensive, and often the most editorially sound, category is that of government and/or institution funded resources and initiatives. These are often intended for a wider audience than those resources falling into the first two categories, and thus may have less of an academic leaning, but as the principals of good searching and evaluation are generally cross disciplinary, this is not a major drawback.

Category 4 –The lone gunmen/women

The final online category identified accounts for that most classical of websites; the private, one man or woman authored treatise. Such sites can vary greatly in length, motive, content and of course quality.

Category 5 – Hard copy resources

There are a variety of books, and chapters or sections in books available to help students locate information on the WWW. As with web resources the extent, and usefulness, of these varies greatly, ranging from a few paragraphs in general study skills books to complete books, often aimed at a specific sector. One major disadvantage of hard copy information is its currency. The Internet is still evolving, and Web sites are often dynamic, with content changing, and moving. Even if the information is excellent when it is written it is likely that links to web sites suggested may become out of date quickly, possibly even before the book has reached the bookshops.

Student requirements

Students with poor skills or low confidence in their skills voiced concern about being asked to use an online guide, stating a preference for a taught approach. Complete tutorials (Category 3) were seen as something that they may be asked to use as part of a course, rather than something that they would find for themselves. This carried with it an expectation that the tutor would have carried out any requisite quality checks. Slaouti (2002) also found this expectation in her research where students expected that any link recommended by a lecturer should be fully quality checked by the lecturer. There was broad agreement from the students in this study that this type of guide should be introduced to them by the tutor, and that further help or assistance when they encountered problems was an essential requirement for this type of guide.

There was consistency in some areas of content requested, with all the groups stating that any guide used should contain more than just the mechanics of using search tools. All the students wanted help with conducting refined, targeted searches. Ease of access and a simple interface was mentioned by some groups, along with the ability to just use the help that was relevant to them at that time. Some groups

thought that any support or tutorial used should be subject specific, along with the expectation that this would include quality checked links to further subject based web sites.

Given their own choice the majority of the students supported problem solving assistance rather than a structured 'work through' tutorial. Helpsheets or help with resolving problems were mentioned by all but one group. IT confident members of two groups were happy to consider help being provided through online means, although this was not supported by the less IT confident members of those groups.

The problem of using online resources to help students develop their online information skills was raised by several of the groups who saw a paradox in that without the skills and knowledge imparted by the online course they wouldn't have the ability to locate the course in the first place.

Discussion

This research had started with the aim of exploring the aspects of an online study guide that health and social care students considered to be the most important for them. Having set out to establish what students wanted in an online resource this study actually found that the majority of the students didn't want to contribute to the development of online tools, they wanted to explain why online tools weren't the right answer.

The focus groups identified that asking most of the students to consider using the Internet unaided was taking them outside of their own comfort zones, and there was, therefore, resistance to this. The resistant students focused on discussing the support they thought they would need before they could start to feel comfortable with this study medium. The students didn't expect to be left to locate their own online tutorials, rather they expected this to be included in the course, with lecturers recommending a suitable tutorial and providing some training or guidance on its use. They also wanted ongoing personal support to be available.

The students who engaged with the idea of using online materials, and were keen to discuss how such materials could be developed to meet their needs, were the students who were already very comfortable with using the Internet. This group didn't feel a need for tutorial style sites as they felt they already had the required skills and wouldn't therefore use them. Their greatest need was for prompt help when they were using the Internet and encountered problems, such as needing guidance on how to evaluate the quality of a site, or reference an online article they had found. This group suggested FAQ's, asynchronous discussion boards and synchronous chat with both fellow students and lecturers as being solutions they would favour.

Understanding the comfort zones

Across the focus groups two distinct types of students emerged, resistant students, who preferred the personal approach to the use of online resource, and engaging students, who were keen to explore how online resources could be developed to meet their needs. The resistant students were a large majority. Some groups had all resistant students; some groups were mixed, however the engaging students were always in the minority and there were no groups with all engaging students.

Where students were resistant to the idea of using online materials the reasons given were connected to lack of skills to use the materials, and preference for the more familiar lecturer led approach to teaching and support. There was no suggestion that learning to use the Internet effectively was unnecessary.

Addressing the needs of resistant students to encourage them to engage with online resources is a multifaceted challenge which includes, but also goes beyond, ensuring that students have the technical skills to use the computer.

One consideration is ensuring that the support available would meet the students' needs if they could be persuaded to try it. A flow chart has been developed (appendix 1) to help students think about where they can find help to develop or improve their searching skills, and where they may be able to get help if they are having problems. Whilst this version is generic it has the potential to be adapted into a local version, for example adding names of staff or details of other course or university specific information to be added. Academics are welcome to adapt this flow chart for local student support use, but please see the request for credit on the chart.

Managing student expectations is another aspect of promoting engagement. One possible reason for the reluctance to engage found in this study is that the students were all attending taught courses. The students therefore have a set of expectations about the educational experience they will encounter. Education can be contextualised according to the type of learning experience offered, characterised by the amount of contact that the student expects to have with the university and staff, that is, its location on the contact continuum (Figure 1).

Courses using an integrated approach are relatively new, and may therefore not be understood by students. Student responses to this study suggest that 'going to university' carried the expectation that they would be joining a 'traditional' course. Students select courses with an expectation of what it entails, and divergence from this creates tension. Had the research been carried out with students undertaking distance or virtual courses a different set of responses may well have been obtained.


Style	Virtual	Distance learning	Integrated	Traditional
				
Contact	No face to face contact, entirely online teaching and support	Some contact, eg summer school and tutorial support, eg UK Open University	Mix of traditional face to face and online methods	Entirely face to face
Potential for online learning methods	Excellent for synchronous and asynchronous communication and use of online teaching and learning (L&T) materials	Excellent for synchronous and asynchronous communication and use of online L&T materials	Excellent for use of online L&T materials. Some potential for asynchronous communication to supplement face to face discussion. Limited for synchronous communication.	Very limited other than use of online material (eg journals) to supplement hard copy, independent reading
Student proximity to education provider	Unimportant	Not important as long as there are transport links for summer school	A major consideration as students have to attend sessions regularly on campus	Crucial, students have to be on or close to the campus during term time.

Figure 1: The contact continuum

Conclusion

Student expectations need to be managed so that they expect to be using online material as part of their learning and teaching experience before they enrol on a course. This is particularly important where online materials are used as part of what would have previously been seen as a 'traditional' course that has now moved to an integrated learning approach, and for distance education that has moved from hard copy materials to a virtual environment. Mature students who do not have recent education experience may be more surprised by the inclusion of online material than younger students who have recently been in the education system. Information aimed at this target market may need particular care.

Whilst good pre-course information is important for many courses, including those included in this study, the aim has to be to help students bring the use of online materials into their comfort zone, not to exclude them if it is not already there. Once enrolled students' reluctance to use online resources to help them develop their information skills could result in their missing some excellent educational support mechanisms. Their lack of IT skills, or lack of confidence in the skills that they have, needs to be addressed to enable them to maximise their use of all the resources available to them.

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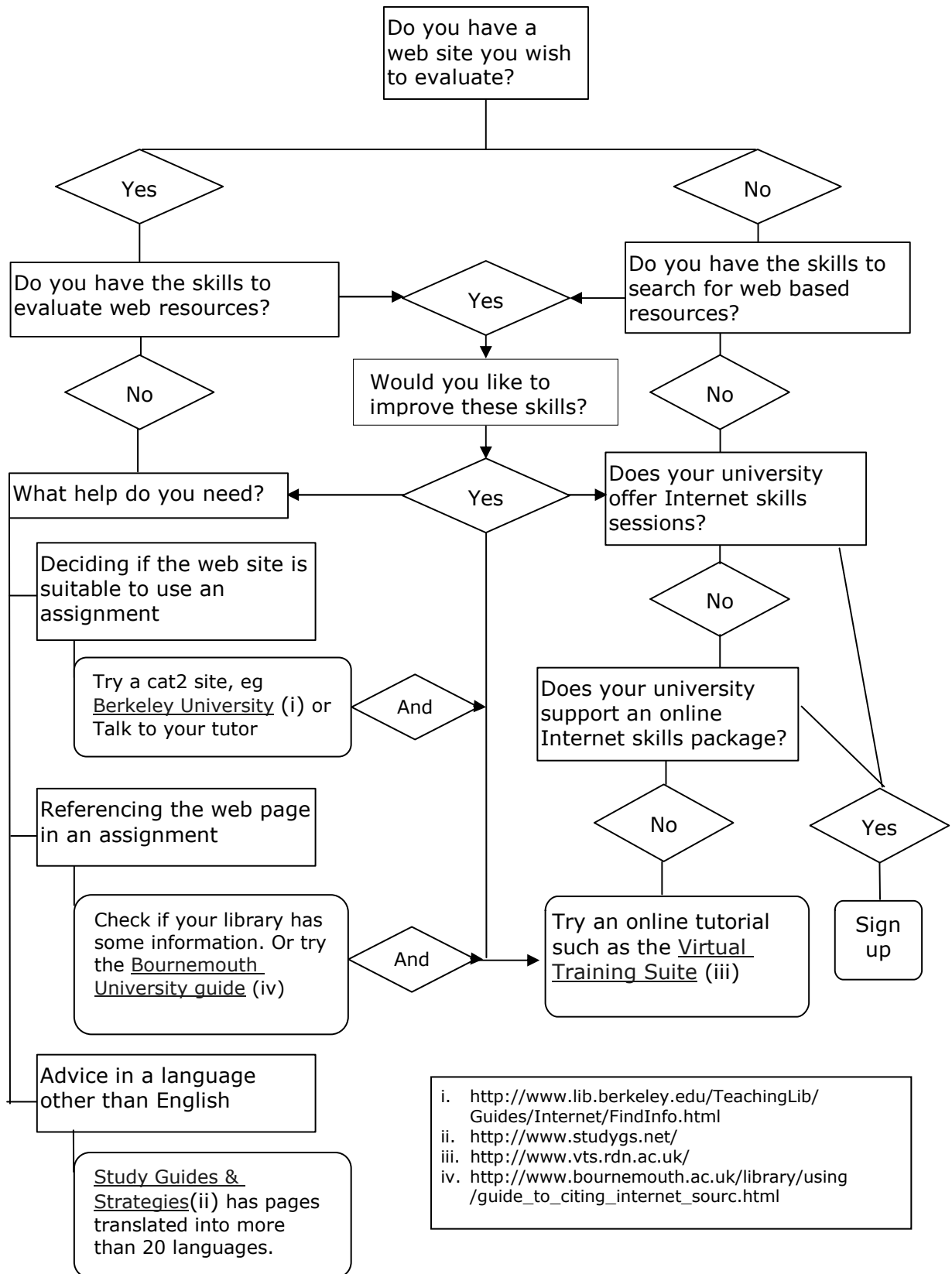
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Appendix 1: Student support decision flowchart



This flow chart may be adapted to reflect local support mechanisms however the authors and the LTSN must be acknowledged. An MS Word copy can be supplied by the authors on request, who would appreciate a copy of any adapted charts. Authors email - ihcs.helpdesk@bournemouth.ac.uk