

Journal of Information Literacy

ISSN 1750-5968

Volume 6 Issue 1

June 2012

Article

Lahlafi, A. E., Rushton, D. and Stretton, E. 2012. Active and reflective learning initiatives to improve web searching skills of business students. *Journal of information literacy*, 6(1), pp. 35-49.

<http://ojs.lboro.ac.uk/ojs/index.php/JIL/article/view/PRA-V6-I1-2012-3>

Copyright for the article content resides with the authors, and copyright for the publication layout resides with the Chartered Institute of Library and Information Professionals, Information Literacy Group. These Copyright holders have agreed that this article should be available on Open Access.

“By 'open access' to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.”

Chan, L. et al 2002. *Budapest Open Access Initiative*. New York: Open Society Institute. Available at: <http://www.soros.org/openaccess/read.shtml> [Retrieved 22 January 2007].

Active and reflective learning initiatives to improve web searching skills of business students

Alison E. Lahlafi, Information Specialist, Learning and Information Services,
Sheffield Hallam University
Email: a.e.lahlafi@shu.ac.uk

Diane Rushton, Senior Lecturer, Sheffield Business School, Sheffield Hallam
University
Email: d.rushton@shu.ac.uk

Erica Stretton, Information Adviser, Learning and Information Services, Sheffield
Hallam University
Email: e.stretton@shu.ac.uk

Abstract

This article discusses the development and impact of an information literacy (IL) collaborative initiative undertaken by a module leader and library staff at Sheffield Business School (at Sheffield Hallam University) to improve business students' web searching skills, in order to support their academic work and develop the IL skills required by future employers. It considers the use of a range of interactive learning activities in a lecture setting - not the preferred setting for information skills - coupled with a web-based research assessment and student reflection on the development of their web searching skills. Student feedback and reflective practice is reviewed and ways of further developing activities to address student feedback and promote further student engagement are suggested.

Keywords

information literacy; higher education; business; web searching; active learning; reflective practice

1. Introduction

1.1 Sheffield Business School business students' web searching skills: identifying a problem

At Sheffield Business School, the module team, having taught the second-year international business undergraduate modules *Managing in a Global Context* and *Globalisation and Business* for a number of years, was becoming increasingly concerned about students' ability to use the internet as an effective research tool.

At Module Review in 2007/ 2008, the team discussed the fact that students were clearly relying on Google and not using databases provided by Sheffield Hallam University (SHU) to access primary research. Feedback from students revealed that they were expecting to find the research done for them in a secondary format and had little understanding of how to go about undertaking primary research using both the free web and sources subscribed to by the University. As Rogers and Swan (2004) state:

"As the internet becomes a resource in the classroom, students must learn to glean maximally from that information using skills that enhance their understandings. Students need to be helped to become better at it." (p.1804)

The students studying the two modules come from diverse backgrounds. *Managing in a Global Context* has full-time students in their second university year, Erasmus students and Chinese students who join the Business School as direct entrants into the second year. *Globalisation and Business* is taken by part-time students in either their fourth, fifth or sixth semester of study. Students therefore start the modules with varying levels of IL experience.

A common theme picked up on by the module team in one to one discussions with students (when giving feedback on assignments), was students' lack of awareness of how much time they would require to do research, think and plan their assignments. Students reflected on their poor research and time management skills. Reviewing student reference lists confirmed the module team's perception that many students were overusing outdated and obvious sources. The range and number of sources was limited. Full-time and part-time students accessed sources they had been introduced to in Year 1 of their studies. For example, students demonstrated awareness of Mintel Oxygen, a market research database which the university subscribes to. However, SHU's subscription is limited mainly to UK information, but students were attempting to use this to access international information rather than use more appropriate sources subscribed to by SHU such as Global Market Information Database, Mintel Global Market Navigator, Business Source Premier or Datamonitor 360, which all have the excellent international coverage required by business students studying international business modules. The Erasmus and Chinese students' feedback indicated limited experience of using web-based information resources.

"A truly global electronic environment now exists for educational information resources, enhanced by hypermedia", (Rogers and Swan 2004, p.1805), but many full-time and part-time home students showed over-reliance on one UK media / newspaper source (usually the BBC) and ignored other international sources which would have been more appropriate to their module needs as students of international business studies.

The module team, through discussion with students, also identified students struggling to apply the limited research they had done to a more practical situation. This was perceived to be for two reasons: 1) the research was too limited to underpin what they were attempting to do and 2) they lacked the skills to transform theoretical textbook information into the international business world.

1.2 Poor web searching skills - a problem common in other business schools

A review of the literature confirmed that poor web searching is commonly observed as being deficient in higher education (HE). There has been a considerable amount written about the 'millennium student', with an overreliance and overconfidence in Google and shallow technology skills (JISC 2009 and Williams, Rowlands and Fieldhouse 2008).

Research focusing on business and management students also identifies many problems similar to those experienced at Sheffield Business School:

"We and many of our colleagues have grappled with the lack of student IL (information literacy), with the common experiences of (...) reading papers with no academic resources, receiving annotated bibliographies of references based predominantly on a Google search."
(Leigh & Gibbon 2008, p.513)

"Business faculty observed students with poor discernment of quality information sources, a limited understanding of the ways to validate sources, limited knowledge or experience in conducting effective and efficient information searches."
(McInnes Bowers et al. 2009, p.111 -112)

In other disciplines such as health, there may be the expectation that students must use academic information as their sole evidence base, but due to the prevalence of good quality free information for business available on the web (Dewald 2005), business faculty staff and librarians must encourage their students to use a wide range of appropriate sources from both the internet and academic databases.

Research points to business students being heavy users of Google. Song (2005 p.31) states: "Google is the primary Internet site for research for 50 percent of domestic and 75 percent of international business students". However, student web searching skills are often portrayed as inadequate, with students "challenged, confused, and frustrated by the research process, despite the convenience, relative ease, or ubiquity of the Internet." (Dubicki 2010, p.361-2) The biggest problem identified is the lack of evaluation of the business information found on the web: "little time is spent in evaluating information, either for relevance, accuracy or authority" (Williams, Rowlands and Fieldhouse 2008, p.179).

1.3 The importance of addressing poor web searching skills

The value of IL within the workplace has been increasingly recognised over the last two decades. As early as 1993 business guru Drucker spoke of the importance of information literacy within the workplace for the survival of business:

"In today's organization, you have to take responsibility for information because it is your main tool. But most don't know how to use it." (Harris 1993, p120)

In 2000 the Global Knowledge Partnership spoke of the "global information economy" and "the conviction that access to, and effective use of, knowledge and information are increasingly important factors in sustainable economic and social development for individuals, communities and nations". A more recent survey of UK SMEs (De Saulles 2007), mirrored Drucker's concern that although employees are technologically skilled, they lack IL skills, and reported that although SMEs regard the internet as the single most important source for commercially valuable information, £3.7 billion (conservative estimate in 2005) is spent on time wasted looking for information that they cannot find.

This highlights the importance of developing student web searching skills so that they learn how to critically evaluate and examine the information they find on the internet before using it in their academic work and subsequently in their business career. As educators, we have a responsibility to produce teaching, learning and assessment strategies that develop information literate graduates who demonstrate the "successful Internet search habits, both cognitive and motivational" (Rogers and Swan 2004, p.1818) required by employers. Therefore at Sheffield Hallam University academics and librarians are working together to achieve this by following the collaborative approach suggested by Lombardo and Miree:

"If we are to develop business leaders who are critical and independent thinkers, it is crucial that academic faculty and librarians work together to introduce today's business students to the structure and content of their information environment throughout their academic program so that they will be well prepared to gather the data they need to make effective business decisions upon graduation." (2003, p.19)

2. Methods

Following our literature review, recognising the commonality and relevance of the problem of poor IL and in particular web searching skills, Module Review in 2007/2008 presented an opportunity to integrate the improvement of students' information literacy into the module's learning, teaching and assessment (LTA) strategy. The module leader believed that a collaborative approach with library staff would enable development of the LTA practice to include a focus on improving students' ability to use the internet as an effective research tool, and to improve use of other quality

academic databases subscribed to by SHU. Library staff agreed that the module leader's desire for a collaborative approach would enable them to embed the IL framework policy developed at SHU.

SHU's IL framework (Sheffield Hallam University 2009) (currently under review) based on the SCONUL Seven Pillars Model (SCONUL 2007), identifies competencies that second-year undergraduates should gain, including the following which relate to the areas of weakness identified by the module team:

- Able to recognise the need to use varied resources and good quality information in their assignments
- Able to select a wide range of appropriate resources to search for information to support their studies. For example, using databases and good quality web resources.
- Able to refine a search to make it more effective.
- Able to recognise the bias and authority of information retrieved.
- Able to critically evaluate and combine diverse material clearly and effectively for a range of purposes.

Within the broader IL framework, it was agreed that the module's first assessment task should focus on addressing poor web searching skills as our literature review had highlighted these to be of particular importance in both academic and employment environments.

2.1 Introducing a web-based research assessment

The first assessment of the module was refocused on improving students' web searching skills as the internet is the tool students are most likely to use in academic assignments and when working in SMEs. This was followed by a workshop on academic databases. The students' improved web and database searching skills then fed into their final assessed research report for the module. These elements allowed students to practise and consolidate research skills development.

As part of our research, we collected student feedback and evidence of the impact of the changes implemented. Feedback was collected using sticky notes at the end of the lecture and a questionnaire at end of the workshop, module feedback forms and verbal comments to the module team. This informed the library team's reflection and consequent discussion with the module leader to make further enhancements to lecture and workshop content and delivery.

2.1.1 Active learning

In part 1 of assessment task 1, students were required to research the topic of globalisation using five different sources (see Appendix 1 for full details). This topic was deliberately broad to developmentally challenge the "techno-savvy overconfidence" of some students (Brown, Murphy, and Nanny 2003, p.386) and make them carefully consider how to refine the topic. Students then evaluated the sources they had selected against the following criteria:

- Accuracy
- Authority
- Objectivity
- Currency
- Coverage

The introductory module lecture "*How good is the web? Critically analysing, selecting and using business information*", was jointly delivered by library staff and the module leader. The lecture started by briefing students on their first assignment which helped give the remainder of the lecture delivered by library staff context and validity.

The "massification" of HE (Marandet and Wainwright 2010), leading to large classes and time constraints, meant that for practical reasons, delivery of the first session to 100+ students was delivered in a lecture theatre setting. The lecture format was not the preferred delivery tool for information skills development, as it is often criticised for being a poor delivery method and unpopular with students (Cavanagh 2011, Jones 2007, Keyser 2000). Keyser (2000) flags the great analogy used by Gremmels of a dump truck to describe lecture-based teaching:

"So we in effect load our pedagogical dump truck as full as we can, back it up to the classroom, and unload it onto our students, burying them in teaching ... When we use the dump truck method, we overwhelm our students with more skills and strategies than they can possibly absorb in an hour. That's our first mistake. Then we fail to give students the opportunity to practice any of the strategies and skills, virtually guaranteeing that they won't be internalized." (p.37)

Library staff and the module leader worked together with the aim of creating a more interactive lecture theatre experience for students, encompassing a range of interactive activities in order to involve the class and promote active engagement (Cavanagh 2011 and Jacobson and Xu 2004) and active learning (Jones 2007). The examples used linked into international business and globalisation issues where possible to improve relevancy for students:

1. A paired exercise identifying business sources already used by the students in the first year of their course, and identifying new resources to use in the future. This allowed students to identify sources they have become familiar with in their first year at SHU, and get them thinking about using a greater range of resources in their second year.
2. Group work reviewing the pros and cons of three different sources (newspapers, peer reviewed journals and a Wikipedia article on international business). There was some particularly lively debate around the pros and cons of Wikipedia. Many students were unaware of what a peer reviewed journal was, and we discussed this in detail as well as showing students how to find these in a journal database. Comments from students were written up live onto the screen, and then compared with pre-prepared comments from information specialists.
3. A video clip from the TV programme *Dragon's Den* (2010) illustrating the need for business research skills in "real life". The clip has Peter Jones suggesting that the *Dragon's Den* candidates are not credible business partners due to their poor internet research skills underpinning their business plan. Students then suggested ideas around "what did they do wrong" in the way the internet research was done.
4. Demonstrations to illustrate the advantages and disadvantages of web resources, using results from a Google search on a pestle analysis for the global company Starbucks.
5. A visual example to humorously underline you can't always take things at face value on the internet (pinpointing the 'unexpected elephant') (British Library, 2002)
6. A website evaluation checklist was provided to support an activity where students evaluated Google findings for a search on GATT (general agreements on tariffs and trade). Students had to pick out the three sites they would look at from a screen of results, and then feed back. This led to discussion about a spoof World Trade Organisation website <http://www.gatt.org/> versus the real WTO website <http://wto.org>, academic sites and essay buying sites.

2.1.2. Lecture feedback

Feedback at the end of the lecture showed that the students regarded this as a worthwhile session and it had generally proved successful in engaging students and opening their eyes to issues

around internet-based research and use of a range of sources. Feedback was via "stop/start/continue" sticky notes put on the wall by students on their way out at the end of the lecture. In analysing the feedback, common themes emerged. The main strands of the feedback are discussed below - quotes are taken from the most recent lectures (2010, 2011).

Feedback strand	Examples of student feedback (lecture)
<p>Style and interactive nature of the session</p> <p>There were many positive comments on the session meeting its goals of being informative, well-organised, concise and easy to follow.</p> <p>A small number of students found the lecture too basic, wanted more or less time, or disliked the interactive content of the session, seeming to want the more traditional lecture format.</p> <p>Erasmus & Chinese students also flagged certain needs.</p>	<ul style="list-style-type: none"> • <i>All good - more group work than normally experienced! Thanks.</i> • <i>Informative, interactive, light and witty</i> • <i>Kept me involved, interesting and easy to understand.</i> • <i>Very interesting, useful information, happy to be here.</i> • <i>Continue interaction with students.</i> • <i>Very informative, don't like group sessions but glad we did it. Most useful session</i> • <i>All was perfect</i> • <i>Easy to follow, concise, clear</i> • <i>Simple, useful and easy to remember</i> • <i>Highly active and it kept me interested</i> • <i>Continue as it is. It covers what you need to know as is very helpful at all levels.</i> • <i>Well presented! Good pace, tone & good activities to keep us interested.</i> • <i>I didn't like that there weren't many notes to make</i> • <i>And wanting more detailed handouts - Not much information on sheets, more leaflets to take home.</i> • <i>Disliked the bits about Google Scholar and Library Gateway, already knew them</i> • <i>Basic information / could have gone faster</i> • <i>Knew the majority of stuff already</i> • <i>Might be useful to walk through an actual example of how to find journal article</i> • <i>Could have gone faster</i> • <i>Some details are known by everyone and don't have to be explained again</i> • <i>Include - Specific information about UK newspapers etc for ERASMUS</i> • <i>I would like more information about English newspapers</i>

<p>Help on different sources</p> <p>The value of discussion about the different nature of sources especially academic journal articles versus internet content was particularly flagged.</p>	<ul style="list-style-type: none"> • <i>I can understand more about the sources from the Internet. More understand about the strengths and weaknesses from the sources.</i> • <i>Thank you for a very useful session. Before you started I didn't know what a peer reviewed journal was!</i> • <i>I thought the session was really useful - not really used academic journal articles in depth, but I know how to now!</i> • <i>Good. Won't use Wikipedia again!</i> • <i>Informed me about using foreign websites as well</i>
<p>Useful content to help improve researching skills</p>	<ul style="list-style-type: none"> • <i>Useful information about researching I didn't know</i> • <i>I feel the session gave a good overview of the various research methods available, including do's and don'ts</i> • <i>I liked the fact I discovered new ways of research</i> • <i>Was to the point. Helping me know more about searching accurate information for my researches. Well shown examples.</i> • <i>Liked it all. Excellent source of information regarding the best way to carry out research.</i>
<p>Relevance to coursework</p>	<ul style="list-style-type: none"> • <i>Eye opener which will come in useful for assignments</i> • <i>Liked that it was useful for this module, but also other modules as well</i> • <i>Made good sense and good advice for researching assignments</i> • <i>Gave us stuff to help out with assignments</i> • <i>Very informative presentation that I found very useful and feel it will help in future work</i>

3. Reflective practice

The module leader and library staff recognised that reflective skills are widely regarded as a means of improving students' lifelong learning and professional practice in higher education (Rogers 2001), and therefore a reflective component to the assignment would be valuable in reinforcing the development of improved web searching skills. As argued by Edwards and Bruce (2002): "It is not primarily technical skills that make effective Internet users, but, rather the reflective and conceptual capabilities that are part of the character of the information literate" (p.181).

Students were therefore required in part 2 of assessment 1 to reflect upon what they had learnt about the use of the internet as a research tool for the module, and their own research capabilities and technique and how they would use and develop them through the module. This approach follows the advice of Edwards and Bruce (2002), who drew on reflective practice and action research in devising a framework within which students were encouraged to search the internet thoroughly, and also reflects the advice by Rogers and Swan (2004):

"Perhaps the most influential instructional technique would be a post-research activity that encourages students to reflect on their search strategies. This can be in the form of self-evaluation." (p.1817)

The follow-up assignment after the interactive lecture was critical in reinforcing the learning points from the lecture, getting students to use and analyse a range of online resources, and, most importantly reflect on their own use of the internet to research assignments and as a research tool.

3.1. Student reflective comments

In many cases students' reflection showed that they related the skills development not only to their current academic studies but also their future workplace, recognising the need for good IL skills. The common themes picked up by students in the reflective exercise (taken from 2010 and 2011 feedback) are outlined in the table below and go some way towards endorsing the views of reflective practice guru Mezirow (2006) as quoted by Ryan (2011):

"When students are provided with opportunities to examine and reflect upon their beliefs, philosophies and practices, and deconstruct prevailing ideologies, they are more likely to see themselves as active change agents and lifelong learners within their professions" (p.3)

Common themes in student reflective comments	
Improving confidence and understanding of best practice in research	<ul style="list-style-type: none"> • <i>The exercise has enhanced my learning greatly, I feel more confident with researching online and more importantly knowing where to look online for what I need. I also now know how to find peer journals and use lit search more effectively. This exercise has also helped me in how to go about research, by planning an idea or a ground on which to work from but as stated previously, it is mainly the point that I now understand better how to find what I'm looking for that I will take away from this exercise.</i> • <i>My entire outlook on searching the internet and selecting sources of information has changed during this assignment, and I am confident it has improved my methods and understanding of using the internet as a research tool.</i> • <i>Overall I have learnt the most important factor to identify respectable material, the process in which to research and problems which I need to overcome to improve my research skills.</i> • <i>Despite previously believing that using internet source was easy, I now realize that when attempting to find quality information and academically sound sources this isn't necessarily true. Checking a website's credibility and comparing and verifying the information to the author's references can be time consuming but is absolutely necessary to ensure the information used is accurate.</i> • <i>This exercise helps me to learn different approaches to research. Such as database searches, citation-based searches or searches using citation indices.</i> • <i>I have never used a peer reviewed journal for a source before and have learnt that they have the best authority and accuracy. Although they are more of a challenge to read, they are probably an essential type of source to use in assessments because of accuracy.</i> • <i>I now also know that searching for material and sources can be quite time</i>

	<p><i>consuming and this is why I need to make sure I have reserved enough time for the researching.</i></p>
<p>Changing research habits</p>	<ul style="list-style-type: none"> • <i>I will definitely use this evaluation technique to find online resources in my other task. I have improved my research technique by using this method for each source. Previously I have been perhaps a little complacent in ensuring my sources are of a good quality and all from different perspectives. With this in mind I believe I have taken a lot from completing the assessment.</i> • <i>I really wanted to improve my internet research skills and feel that I have managed to achieve this. For me. The evidence of this is that I have looked into the subject in question far more thoroughly than any subject before by looking at/using different search engines/methodologies which I have not used before.</i> • <i>When I first began this assignment I knew relatively little about web-based research however with the task set before me and my first few forays into picking suitable sources from which to draw my report from, I soon discovered that I knew even less about web-based research than I had first thought. My research skills have improved exponentially as I continued to make progress on my report.</i> • <i>I now believe that research is not gaining huge amount of resources on the subject, but using resources wisely to harvest ideas and opinions useful for the work involved.</i> • <i>I am more likely to use international articles which may be relevant to the assignment.</i> • <i>I found it relatively straightforward to successfully locate the majority of relevant information from different sources. In fact, the real challenge I felt I faced was trying to break the research habit I previously had such as always looking at the same sites for information.</i> • <i>The main way in which I did this was to use a journal article for the first time. I had previously avoided using a journal before, possibly due to their size, complexity and the language style used. So this assignment is just what I needed to really move this research method forward and fully widen my approach. As a result of this, I really feel that this will allow me to improve the overall quality of all my assignments - not only to this module, but also the critical final year modules I am currently undertaking. (Level 6 student doing module as a replacement for Level 5 module failed in the previous year).</i> • <i>The exercise has enhanced my research knowledge, it makes me more critical and aware of what to use, in terms of reliability. This also taught me to use academic search engines, in order to find accurate sources and supplementary data to the topic researched.</i> • <i>The main thing I have learnt about my research technique that it was</i>

	<p>wrong from the offset, trying to use conventional searches in Google is almost impossible. I have changed my entire outlook on searching the internet for sources of academia, my techniques and order of preferences have changed completely.</p> <ul style="list-style-type: none"> • I have learnt that my research technique before was really quite lazy. Before doing this research task I would have probably just conducted an internet search, picked five websites and made the information that I found fit what I was trying to say. I will now be more vigilant and try much harder when it comes to my coursework.
<p>Understanding the importance of information literacy for academic work and in the workplace (employability)</p>	<ul style="list-style-type: none"> • All of this will not only greatly help me when it comes to researching my other assessment tasks but will be a skill which stays with me forever. • This is a learning curve for me and I will be using the benefits of the library gateway and will use peer reviewed journals for future assignments. • Therefore with my new learnt techniques, I should improve my mark and achieve at a higher level. • Just by looking at a few types of resources which I hadn't before I feel I improved my researching. Next time I should develop my skills by looking at peer reviewed articles and journals. • This assessment, though it was annoying me when the research did not seem to come to an end, equipped me with better and quicker analysis skills for all kind of researches. • These skills should help me not only in other modules at university, but they can also be used collectively in the working world as well. • These skills developed will be beneficial to both this module and every other research tasks I undertake in university and my professional life. • In future assignment I will pay much more attention to the sources I'm using and this will undoubtedly improve the quality of my work not only in this module, or even at university but also my working life.
<p>Recognising the value of SHU Library Gateway as a portal to quality information</p>	<ul style="list-style-type: none"> • In the past I have only used the SHU Library Gateway to obtain market sector reports as I struggled to find these free of charge elsewhere, I didn't consider searching for journals and articles in this way believing they were readily available through other general search engines. By exploring the library gateway I found that by using the advanced search within I was able to define my search more effectively and quickly find appropriate academic literature. • Going forwards I would still find it beneficial to combine both textbook reading and using online resources although I would now ensure that I use Library Search as my first point of call for online purposes and not use Google as this saves time in searching lots of unnecessary

	<p><i>information that often is not accurate.</i></p> <ul style="list-style-type: none"> <i>I now have a greater understanding on how to use the library gateway and also how to use specific key words effectively.</i> <i>The library gateway has been a key determinant as to why my research skills have improved as I have been able to use this to find more appropriate research and the correct type of research, therefore I am likely to use this more often in the future.</i> <i>One thing I have learnt about using the internet as a research tool is that there are other easier ways than using Google to search for sites which have information on a subject. For example I can use the library gateway.</i> <i>For my other assessment tasks I will definitely be making more use of the library gateway, this is because when searching for my peer reviewed journal it allowed me to be very specific and I found exactly what I wanted meaning that it saved a lot of time.</i>
<p>Feedback from Erasmus / Chinese students about developing new skills</p>	<ul style="list-style-type: none"> <i>It was the first time that I used the internet as a resource tool at academic level because in my home institution in Florence teacher's have never asked me to do researches, but only study on the texts. Therefore it was very difficult habits but very useful for my learning</i> <i>This lesson was very interesting for me, in Italy nobody explain who (sic) we can use the sources for a research. I think it was very important for me. Thank you.</i> <i>Every time I have to research a topic I went to Google and I did not care what kind of resources there were, I choose the one that fit better with my needs.</i> <i>Our generation is characterised by the great facility to search and actually find every information needed: most of the merit goes to the World Wide Web that lets everybody have access to a lot of data that without the web would be impossible to find. However, it is important to keep in mind that with online resources there are not just good information but it is needed a selection.</i>

4. Impact

By using active and reflective learning techniques embedded within an academic module, library staff and the module leader have created a successful lecture format with a follow up consolidation activity and reflective practice. This has promoted student engagement in their own development as autonomous learners, resulting in more information literate students with valuable employability skills. As indicated by the student feedback, they have found the support and guidance in developing their web searching skills has had an impact on their approach to research. Tutors have evidence of this from the final student assignments. There was a wider and deeper range of resources used:

- no references to Google or Wikipedia sites (previously main or only source for many students)

- use of library databases such as GMID
- use of non-UK sources such as foreign newspapers and government sites
- exploration beyond "student areas" of international organisation websites e.g. WTO, EU, IMF
- wider use of subject specific textbooks (including e-books)
- some use of peer reviewed journals (limited to high achieving students)

Further evidence of the impact of the initiative comes from students in their final year who have commented on how the skills learnt have enhanced their approach to research. They recognise the value of this in helping to achieve a good degree grade. For example, a final-year UK student, mentoring Chinese students joining the programme for the final year, supported them in their introductory information skills workshop. As well as demonstrating the skills he had learnt in the module, he enthusiastically endorsed the usefulness of the skills taught to him by library staff through *Managing in a Global Context* module. He stressed that developing web researching skills would enhance their learning and impact positively on their assignment grades.

5. Conclusion and ways forward

The module leader and library staff believe that this initiative has had a real impact on the web searching skills of business students. Further work is ongoing to enhance the initiative and collect more evidence of impact. Feedback from students though predominantly positive, shows that there are still some areas for improvement with the lecture, and as the module runs twice a year, work will be undertaken on revising elements of the lecture to address student suggestions and negative comments, and module review team ideas:

- Wikipedia and Google Scholar issues. Cover in less depth, as there is evidence of increased student awareness around these sites.
- Address issues around Erasmus students who join the module. Ensure they get a separate induction to the library. Include more information about UK newspapers (for Erasmus and Chinese students) and non-UK newspaper sources for all students, and promote the NEXIS UK database which gives access to a range of newspapers - for example, demonstrate a search for articles on *globalisation* in Asia Pacific news sources.
- Demonstrate how to limit journal article searches to peer-reviewed articles.
- Look for further video clips / other visual examples.
- Look for further "real life" examples to tie in with placements and workplace.
- Send students the assignment before the first lecture to enable them to have a deeper understanding of the assignment tasks, to better contextualise the lecture.

At the start of the November 2011 lecture, the module leader handed out a short questionnaire in order to gain a better picture of student research skills at the start of the module. The questionnaire will be repeated at the end of the module, after the students have had the lecture and assignment described in this paper and a follow-up two-hour library workshop using academic databases, which allows students to research a report which forms the main assessment task of the module. The results of the questionnaire should help both in further development of the lecture and workshop, and provide evidence of changes of attitude and approach by business students undertaking research using the internet.

References

- British Library. 2002. *Lie of the land: the secret life of maps - Unexpected elephant*. [Online] Available at: <http://www.bl.uk/onlinegallery/features/lieland/m3-3-1.html> [Accessed 28th November 2011].
- Brown, C., Murphy, T. and Nanny, M. 2003. Turning techno-savvy into info-savvy: authentically integrating information literacy into the college curriculum. *Journal of Academic Librarianship* 29 (6), pp. 386-398.
- Cavanagh, Michael. 2011. Students' experiences of active engagement through cooperative learning activities in lectures. *Active Learning in Higher Education*, 12 (1), pp. 23-33.
- De Saulles, M. 2007. Information literacy amongst UK SMEs: an information policy gap. *Aslib Proceedings*, 59 (1), pp. 68-79.
- Dewald, N.H. 2005. What do they tell their students? Business faculty acceptance of the web and library databases for student research. *The Journal of Academic Librarianship*. 31 (3), pp. 209-215.
- Dragon's Den. 2010. *Dragon's Den, Letitia Valentine & Alexander Lewis*. BBC2 [Online] Available at: <http://www.bbc.co.uk/dragonsden/entrepreneurs/letitiavalentine.shtml> [Accessed 3 January 2011].
- Dubicki, E. 2010. Research behavior patterns of business students. *Reference Services Review*, 38 (3), pp. 360-384.
- Edwards, S.L. and Bruce, C. 2002. Reflective internet searching: an action research model. *The Learning Organization*, 9 (4), pp.180-188.
- Global Knowledge Partnership. 2000. *The Global Knowledge Partnership*. [Online] Available at: http://www.techknowlogia.org/TKL_Articles/PDF/110.pdf [Accessed 22 December 2011].
- Harris, T. G. 1993. The post-capitalist executive: an interview with Peter F. Drucker. *Harvard Business Review*. 71 (3), pp. 114-122.
- Jacobson, T.E. and Xu, L. 2004. *Motivating students in information literacy classes*. New York, Neal-Schuman.
- JISC. 2009. *Thriving in the 21st century: Learning Literacies for the Digital Age*. [Online]. Available at: <http://caledonianacademy.net/spaces/LLiDA/uploads/Main/LLiDAreportJune09.pdf> [Accessed 21 December 2011].
- Jones, S.E. 2007. Reflections on the lecture: outmoded medium or instrument of inspiration? *Journal of Further and Higher Education*. 31, pp. 397-406.
- Keyser, M. W. 2000. Active learning and cooperative learning: understanding the difference and using both styles effectively. *Research strategies*, 17, pp. 35-44.
- Leigh, J. and Gibbon, C.A. 2008. Information literacy and the introductory management classroom. *Journal of Management Education*, 32 (4), pp. 509-530.
- Lombardo, S.V. and Miree, C.E. 2003. Caught in the web: the impact of library instruction on business students' perceptions and use of print and online resources. *College and Research Libraries*, 64 (1), pp. 6-21.
- Lahlafi, Rushton and Stretton. 2012. *Journal of information literacy*, 6(1). <http://ojs.lboro.ac.uk/ojs/index.php/JIL/article/view/PRA-V6-I1-2012-3>

Marandet, E. and Wainwright, E. 2010. Invisible experiences: understanding the choices and needs of university students with dependent children. *British Educational Research Journal*. 36 (5) pp. 787-805.

McInnes Bowers, C.V., Chew, B., Bowers, M.R., Ford, C.E., Smith, C. and Herrington, C. 2009. Interdisciplinary synergy: a partnership between business and library faculty and its effects on students' information literacy. *Journal of Business and Finance Librarianship*, 14 (2), pp. 110-127.

Rogers, R.R. 2001. Reflection in higher education: a concept analysis. *Innovative Higher Education*. 26 (1) pp. 37-57.

Rogers, D. and Swan, K. 2004. Self-regulated learning and internet searching. *Teachers College Record*. 106 (9) pp. 1804-1824.

Ryan, M. 2011. Conceptualising and teaching discursive and performative reflection in higher education. *Studies in Continuing Education*. pp.1-17. [Online] Available at: <http://www.tandfonline.com>. [Accessed 26 March 2012].

SCONUL. 2007. The seven pillars of information literacy original model. [Online] Available at: http://www.sconul.ac.uk/groups/information_literacy/sp/model.html [Accessed 7 March 2012].

Sheffield Hallam University. 2009. Information literacy framework. Unpublished.

Song, Y-S. 2005. A comparative study on information-seeking behaviors of domestic and international business students. *Research strategies*, 20 (1-2), pp. 23-34.

Williams, P., Rowlands, I. and Fieldhouse, M. 2008. The 'Google Generation': myths and realities about young people's digital information behaviour. In: Nicholas, D. and Rowlands, I. (eds.) *Digital consumers: reshaping the information professions*. Oxford: Chandos.

Appendix 1

Assessment Task 1

Part 1

You are required to research the topic of **globalisation** through five online resources such as:

- peer reviewed journal article
- journal article
- newspaper
- international organisation
- pressure group
- non-UK/USA site
- government site

Compare and contrast each website/article and evaluate the credibility of each website:

- Accuracy of article/website
- Authority of article/website
- Objectivity of article/website
- Currency of article/website
- Coverage/evidence base of the article/website

This should be produced as a table of key points. You should then write a discursive and analytical commentary of the key issues relating to the above. You should include referenced examples from the articles you have found to illustrate and support the points you are making.

1500 words.

You must use Harvard referencing.

Part 2

Write a reflective summary (2 sides A4) of:

(A) What you have learnt about the use of the internet as a research tool for this module.

(B) Your own research capabilities and technique and how you will use and develop them through this module.

You should include the following, plus anything else you consider relevant:

- Ease of use of the online resources
- Did you just use the directed page or did you explore? Why/ why not?
- How easy was it to find supplementary material?
- How easy was it to find out information about the author of the article?
- What is the advantage/disadvantage of using online resources as opposed to books/ journals?
- How this exercise enhanced your learning in terms of both knowledge and researching
- How will you use what you have learnt about the internet as a resource in your other assessment tasks?
- What have you learnt about your research technique?