WELL Done and WELL liked: online information literacy skills and learner impressions of the Web as a resource for foreign language learning.

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Abstract

One of the most common uses of the World Wide Web for foreign language learning is as a resource for students to find information when researching essay topics. When language instructors ask students to perform searches for information about a given issue it is assumed that students know how to perform those searches and appreciate the usefulness of the web. However, we do not really know much about the relationship between learners and the Web: what processes are involved, how the students go about the search process and what their perceptions of the Web are. It is therefore essential that these assumptions are examined and researched.

In order to find out more about these questions, a study was initiated. The aim of this study was to obtain information on how foreign language higher education students interact with the Web in general and in the context of a search for content/reading tasks in particular. The goal was to produce a descriptive snapshot of student impressions and abilities at one given moment. For this purpose 198 students of Spanish at the University of Southampton were asked how they use the Web, what for, how they go about finding the information they need, what they perceive to be the advantages and disadvantages of using the Web as a research tool for language learning, to

compare it to other resources and what their perceptions of it are. To measure their degree of online information literacy, a scale was created.

In this paper the details of the project will be presented, and the findings of the study discussed.

1 Introduction

One of the many challenges that UK Higher education institutions face in their attempt to provide foreign language instruction is the provision of tuition. It is common practice that student-instructor contact hours are only a fraction of the study time a student spends learning the target language. The rest of the time, the student is expected to learn autonomously using a variety of resources (normally) at their disposal, such as language centres, language laboratories, libraries etc. The use of the World Wide Web as one of these resources is growing in this context.

The use of CALL (and subsequently Web-enhanced Language Learning as well) has moved on from drill and practice exercises based on a behaviourist view of language learning. A constructivist view of the learning process as an active process on behalf of the learner, where knowledge is constructed individually is now favoured (Warschauer & Healey 1998). One of the current uses of the World Wide Web in foreign language teaching is as a resource for students to find information when researching essay topics on current issues about the areas where the target language is spoken. In their "Web Skills for Language Learners" publication from the WELL (Web Enhanced Language Learning) project, Mansfield and McNeill describe the usefulness of the World Wide Web for language teachers and learners.

> "[B]ecause the World Wide Web has now become the major delivery medium for text, graphics, sound as well as video with thousands of businesses, universities, government departments and individuals setting up their own pages, it is an invaluable source of authentic materials for language teachers and learners (…) including most, if not all, of the

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languages currently taught in universities throughout the UK" (1998: section 1.2)

Language learners can benefit from authentic materials found online in the same manner as they do from traditional sources of information such as books, newspapers, brochures etc. Most of these materials are available as texts, although some are also available on audio and video. Online technologies enhance student access to up-to-date authentic materials, thus fitting in with the premises of resource-based learning (Lafford and Lafford 1997). The resource-based class works from the premise that research-based learning is a good method for language acquisition. Of course, language learning does not occur simply because of exposure to target language material, other factors such as metacognitive skills, reading techniques, and critical evaluation skills are involved. Students search for and access authentic texts in the target language and learn about aspects such as the history, culture, and politics of the areas where the target language is spoken, and at the same time they acquire not only cultural knowledge, but also vocabulary and grammatical structures. Texts thus also become sources of information about the usage of the language (Ryan 1997) and have the potential to draw the learner into the communicative world of the target language community (Little 1997). Authentic texts can develop confidence in the learners, as they appreciate that full comprehension is not necessary to learn, and also bring together language learning and use. In conclusion, as Hare (1998:42) put it "use of the Web within the curriculum is consistent with thinking in the fields of resource-based learning, distance learning and learning technology".

There are a number of issues that spring from the use of the Web as a source of reading materials: reading on the Web is different from reading a printed text (Ganderton 1998). Users do not read online in the traditional sense of the word: hypertext changes the way online texts are accessed and read as the reader of online texts creates their own text by deciding what parts to read (Cobb and Stevens 1996). Nielsen (1997), found that only 16% of users read online texts word by word and 79% scan rather than read.

However, reading the materials is only part of the process and is not the main focus of this study. To be able to access those materials, users need to find the information they need first. As Isbell and Reinhardt point out, this is not a straightforward process:

> Conducting research is the big area where students need to have Web literacy skills, especially as more and more research is done online. Students need to know how to use search engines, Web directories, and keywords. They especially need to know how to be critical of online sources. The World Wide Web, unlike a library, is not checked for accuracy, truth, or even spelling. Certainly we as teachers and Web users know it, but our students probably do not. In a digital age, students need independent critical evaluation skills more than ever (Isbell and Reinhardt 2000:4).

The processes of reading and finding information online become part of the same process, and that process forms part of the student's own online information literacy skills. In the mid 1990s, Kaplan defined the term E-Literacy as "the knowledge and skill required to make marks in electronic age with electronic devices" (1995:11). She differentiates two kinds of electronic literacy:

> one kind entails making a mark -- being able to record language or pictures or whatever in some form or other, to store and to retrieve the records, perhaps even to combine these records in meaningful ways; the other entails making one's mark -- in print's terms, being published, authorized to speak on a given subject. (*Ibid*)

Later, Warschauer (1999) refined this by dividing electronic literacies into reading and research literacies and writing and authoring strategies.

The concept of electronic literacy is not limited to this, however, and now the terminology tends to refer to multiliteracies, which include sociocultural aspects (Kasper 2000, Cope and Kalantzis 2000). As our area of interest is only concerned with student researching information online for a given task, we will only be concerned with online information literacy skills, which we define as the

necessary navigation skills required to obtain accurate, relevant and reliable information available online in an adequate time frame, using appropriate search terms and tools, and the ability to store that information in a medium that is appropriate.

Warschauer (1999:3) states that reading online involves 4 skills:

- Being able to find the information to read in the first place (through Internet searches, etc.).
- Being able to rapidly evaluate the source, credibility, and timeliness of the information once it has been located.
- Being able to make rapid navigation decisions as to whether to read the current page of information, pursue links internal or external to the page, or revert back to further searching.
- Being able to make on-the-spot decisions about ways to save or catalogue part of the information on the page, or perhaps the complete page.

It is on this definition of the skills involved that we shall base our evaluation of students' own online information literacy skills. In this paper we shall not deal with the question of whether Language Learning strategies are being utilised whilst students surf the WWW, as it is not the focus of the study and evidence of such strategy use it is probably best elicited with the use of observation.

Given that the World Wide Web is a relatively new medium for delivery of authentic texts, it is essential that the learner attitudes towards the medium are investigated if we want to assess the use of the Web for language learning purposes. Before we can evaluate the effectiveness of a tool we need to know how the tool is used. Perceptions of the Web as a source of information in the target language are assumed to be positive, as is the fact that students appreciate the usefulness of the web. This is not to say that positive perceptions equal increased language learning outcomes. Also, although we can assume that they are to a certain extent related, liking the Web or finding it useful does not mean that students are more or less Web literate.

Through the mid and late nineties there were several studies about motivation and in particular about attitudes towards or perceptions of CALL and the Web. E.g.: Warschauer (1996), Brett (1996), Fox, Holder and Weaver (1998), and Wright, Piper and Watson (1996). The first two found very positive attitudes towards the Web or multimedia in general and the latter two found more mixed reactions. Fox *et al* find the assumption that the current generation of students is computer literate and enthusiastic about them debatable. Piper *et al* found that "many [students] lacked the necessary technical, research and linguistic skills, or appropriate learning strategies, either to explore its resources or to use these for language learning" (Piper *et al* 1996:12). They recommend investigation into "the interactions between the design of the resources, the learning activity and the learners' behaviours" (*ibid*). Their study provides a very clear portrayal of student perceptions of the Web, as well as some of their strategies when using it. It does not present a very optimistic picture of the role of the Web for language learning, but as this study was undertaken in the early days of the Web, many of the obstacles presented were a consequence of the novelty of the medium.

Other studies have been carried out to provide an insight into learner use of the Web in resource-based language learning such as Oliva and Pollastrini (1995), Osuna & Meskill (1998) and Lamb and Fisher (1999). In varying degrees, they all found positive features in the use of the Web to increase language and cultural knowledge, as well as motivation. Felix (2001), found overwhelmingly positive responses to Web resources. Her study was conducted after the data collection for this study, and is similar in aims to ours, but in a smaller scale.

When language instructors ask students to perform online searches for information it is assumed that students:

a) know how to perform those searches and
b) appreciate the usefulness of the web

It is essential that these assumptions are examined and researched. The aforementioned studies provided us with a basis for this study but, given the evolving nature of the Web and its further penetration into homes and higher education institutions, have dated quickly. Consequently, a case study was set up in 1999 at the University of Southampton with a sample of 36 final-year students (Rosell-Aguilar 2003). The aim of this case study was to obtain data on how Foreign Language Higher Education students interact with the Web in general and in the context of a search for content/reading task in particular. The goal was to produce a descriptive snapshot of student impressions and abilities at one given moment.

The study gathered a large amount of information about student reported behaviours when doing information searches and found very positive attitudes towards the Web as a resource. However these results were limited by the size of the sample and the way the data was collected with an open questionnaire. Therefore, the study was repeated a year later with a much larger number of subjects and with a closed questionnaire. In the following sections we will present the details of this subsequent study and discuss our findings.

2 Method

A new questionnaire was created and distributed in April 2000. It asked students how they use the Web, what for, how they go about finding the information they need, what they perceived to be the advantages and disadvantages of using the Web as a research tool for language learning, to compare it to other resources and what their perceptions of it were The questions and most common answers to the pre and post questionnaires from the pilot study were adapted into two main types of questions: yes or no, or choose options, with the only open question asking the reason why they would you want to use the Web again.

The questionnaire was delivered to all the Spanish language students taking resource-based units at the University of Southampton. All levels were included. Students were allowed a maximum of 15 minutes to complete the

questionnaire. The questions in the questionnaire were divided into a first question about their use of resources in general and then 5 sections on their use of the World Wide Web and email, their online "surfing", the usefulness of the Web for research for the courses they were following, how the Web rated in comparison to other sources of information, and what they thought of the Web as a language learning tool.

To analyse the results from the questionnaire a scale was set up to allow us to provide a score to each participant for online information literacy skills. This scale is hypothetical, having been created solely for the purpose of analysing this data and aims to be indicative.

Online information Literacy skills scale:

1	Very poor
2	Poor
3	Average
4	Good
5	Proficient

Definitions of each score:

Very poor: struggles with common applications. Does not understand URLs. Cannot find relevant information. Uses inappropriate search terms and language. Cannot save information. Does not understand how links and certain buttons work. Is afraid of "messing up".

Poor: is not at ease with common applications. Does not pay attention to information on URLs. Gets easily "lost" on the Web. Struggles to find relevant information. Takes a long time to locate available information. Uses the "print" button as only way to save information.

Average: effective user of the Web for general needs. Has a basic command of the necessary hardware and software to help him or her perform basic tasks. Uses appropriate search terms. Can store information.

Good: able to use the Web to locate required information in reasonable amount of time. Can use hardware and software. Uses good search terms. Utilises previously known sites. Evaluates sources. Can store information in several formats.

Proficient: easily finds relevant information in short time. Selective of sites, authors, media, and browser. Can store information on several formats, either in HTML or Word. Utilises good search terms and helpful extras (inverted commas, "+", limit search). Utilises target language search engines and terms.

It is worth highlighting that there is a certain amount of subjectivity inherent to the devising of scales such as this. There is no certainty or way to justify what makes a student "average" in this context. As students get more computer literate, is being able to, say, cut and paste from a Webpage to a document, something we can expect a "good" or an "average" user to do? This gradation is there for statistical purposes and to allow us to obtain scores for the different degrees of information literacy skills at the particular time and circumstances of the "snapshot".

For the purpose of the study we do not question the students' ability to provide an educated opinion of the Web and its language learning uses, but simply their opinion as more or less experienced users. The study is limited by the choice of self-report as a tool for information gathering. Much of the information from the questionnaire is of great interest as it gives us details that many researchers in the field of CALL have assumed, but without precise knowledge. It provides a snapshot of language learners at one moment in time. A great amount of the information relates to our hypotheses on information literacy and perceptions of the Web, and they will be the focus of the next section.

3 Results

In this section we will first present the results from the most relevant questions from the questionnaire to produce a descriptive student snapshot, and then we will present the scores that relate to the information literacy skills scores achieved by the participants.

The potential number of students reached was 283 and 198 questionnaires (69.96%) were returned. Four were eliminated because of their mother tongue being Spanish, therefore N= 194. Out of these, the breakdown by year of study was as follows: 75 (38.7% of N) were in year 1, 64 (33% of N) in year 2, 1 (0.5% of N) in year 3 (all but one student in year 3 were on year abroad) and 54 (27.8% of N) in year four. Of the respondents, 147 (75.8%) were female and 47 (24.2%) were male.

3.1 Descriptive snapshot of student impressions and abilities

As in the study of the previous year, the participants' responses paint a picture of experienced Web users for the most part: they are students who have been using the Web for a year or longer (90.7%), use it often (40.7% two or three times a week, 35,1% daily) and for half an hour to an hour at a time, access it from university (99.5%) but also have access at home (66%).

The Web was the favourite source of information for essays: 78.9% ticked "Websites" as the source they use the most, and for 12.4% it was their second choice. Only 5.7% of students altogether numbered "Websites" as fifth, sixth or last choice. They use the Web to obtain information for their Spanish courses (98.5%) as well as others, and use email regularly (97.5%). 87.6% of students feel quite confident using the Web and cope well with browsers and hypertext. 90% say that they experience problems while using the web, but most of the problems are either to do with server errors, pages no longer being available or connection speed. In addition, 68% are not put off by encountering those problems.

60.3% of respondents do not always find the information they are looking for. However, 79.4% stated that they find the information easy to locate and 83% consider the information they do find sufficiently informative. 67% of students make notes of new expressions, vocabulary or grammar, but of those only 20% do it before printing.

Finally, 76.8% of the participants stated that they thought they were learning Spanish whilst using the Web and 87.6% of the students replied that the time they spend online is worth it, although a lower number, 68.6%, state that they prefer the Web to paper-based resources. 94.8% would want to use the Web again.

3.2 Online information literacy skills scores:

The scoring system used to allocate a numerical score to the questions relating to the online information literacy skills is explained in the Appendix. A total of 184 information literacy scores were recorded after 14 were eliminated, therefore, for this section N = 184. There was not a great amount of difference between the different language levels. The overall scores for information literacy showed that 153 (83.1%) were average or above with the other 31 (16.8%) below average. The mean average was 3.41, showing that although almost 17% of the students were below average, they were not (with the exception of three who scored below 2) very far below average.

For each of the four individual online information literacy scores (A to D, as detailed in the Appendix), the scoring produced the following results:

Score A (reading information found) produced a mean average of 2.8, the lowest of the category and the only one below "average". Only 12 students scored a 5 and 29 between 4 and 5. 69 students scored between 3 and 4, "average" and a further 73 scored below "average", with 37 students scoring between 2 and 3 and 36 between 1 and 2.

Score B (navigation) had a much higher mean average of 4.2. 105 students scored 5 and 38 scored 4, making the majority of students above average. 26 students scored 3 and only 15 students scored below average, with ten scoring 2 and five scoring 1.

Score C (encountering problems) produced a mean average of 2.7, just below "average". 110 participants (60%) scored 3, with three scoring 4 and only 20 scoring 5. 41 participants scored 1 and 9 scored 2 (another scored 1.5).

Score D (search skills) had an average mean of 3. Eighty-seven students scored between 3 and 4, and 34 students scored above average (four scored 5 and 30 scored between 4 and 5) with 63 students scoring below average (56 scored between 2 and 3 and seven between 1 and 2).

Question 18 was used as a control device. The vast majority of participants replied that they did indeed feel confident using the Web. Only 21 students replied that they did not.

4 Discussion

In this section we will first examine the results of the study explaining the findings in terms of the information literacy skills score of the participants. Then we will consider their perceptions of the Web as a useful resource for language learning. We will use quotes from the students' open responses to support our findings.

4.1 Online information literacy skills:

The fact that 83% scored average or above leads us to presume that the definition of what is average literacy among the surveyed participants, which we previously indicated was subjective, is appropriate, since we expected the majority of participants to fit in this category.

The vast majority of participants replied that they did indeed feel confident using the Web. Of the 21 participants who did not, 16 scores were consistent, as the low literacy skills inferred from answering "no" was matched with low literacy skills scores. The remaining five students had a score of just over 3, which again can be interpreted to support the scoring system.

Given that it is a common complaint how slow the Web can be at times, it was expected that the replies to the question about whether the time they spend online searching for information is worth it would not be very positive. However, nearly 90% of the students replied yes and only 9.8% replied no. This may be due to the high speed connection available at the computer rooms at the language centre and the faculty or possibly to a real ability to find the necessary information without wasting too much time.

It is interesting that 85 students consider being asked to download a program a problem. With the high speed connection available, downloading a program is usually a question of minutes or even seconds at their machines. It appears, however, that that is more than the students are prepared to do. The inferred problem is that there is an element of fear of, and lack of experience at having to install new elements on the public computers. This could suggest that their computer literacy may not overall be very high. Another instance that suggests this is the fact that when encountering problems 27.8% give up, and only 13.9% actually overcome them. However, despite such a low number of students who manage to overcome their problems, most are not put off; they get around them and still manage to find the information they need. This could be interpreted as very high information literacy skills, since they clearly are, for the most part, able to succeed in the task of finding information despite the technical faults.

When asked what they find least helpful, the responses highlight the fact that they do not always find the information they are looking for, ticked by 60.3% of the students. Being able to find the information depends largely on whether the information is there to find in the first place and the ability to locate it. The former depends on the essay topic, of course, and the latter is a key part of their information literacy skills. This casts some doubts on the students' overall

information literacy skills. However, the key, we assume, lies in the expression "not always", as 79.4% stated that they find the information easy to locate.

Looking back at Warschauer's division of Information literacy into four skills we can now evaluate how the students surveyed performed with regards to their information literacy skills:

The first skill is "being able to find the information to read in the first place". This area is covered by score B, where we saw that they know how to navigate and they find the information easily, and by both score C, where we saw problems are overcome, and by question 22, where we found students are not put off by technical problems. It is also to a certain extent covered by score D. This confirms that the students do find the information and even consider it easy to find.

The second skill is "being able to rapidly evaluate the source, credibility, and timeliness of the information once it has been located". The fact that most of the students, as seen on the replies to question 26 (full questions and answers are available in the Appendix) use reliable sources such as the university's links page, online newspapers, and search engines in the target language, suggest they are indeed aware of the source, credibility and timeliness of the information.

Skill number three is "being able to make rapid navigation decisions as to whether to read the current page of information, pursue links internal or external to the page, or revert back to further searching". Questions 15 and 16 within score B dealt with this and showed a high number of students find the links clear and know how to navigate. In addition, the fact that they use multiple sources of information and the fact that most students stated that they scan read the page shows that they do make appropriate navigation decisions that take them to the information they are looking for.

Lastly, skill number four is "being able to make on-the-spot decisions about ways to save or catalogue part of the information on the page, or perhaps the

complete page)". Again in the replies to question 12 (Score A) we saw that a vast majority of the students print pages and that they also save to disk and cut and paste onto Word documents to store the information they find.

An issue that Fox, *et al* considered debatable was the assumption that students are computer literate. The results presented here corroborate that assumption, for, as we have seen, there were high scores in the area of online information literacy skills. In fact, the results seem to bring us nearer to Warschauer's (2000) vision of the changes occurring within information and communications technology: that users are becoming "native" in proficiency with computers in general (and the Web as part of them) and thus achieving "agency" by mastering the new genre.

4.2 Perceptions of the Web: do students appreciate the usefulness of the web?

As we have seen, the majority of the students consider the information they need easy to find and sufficiently informative ("It's an easy fun way of learning about events going on in Spain and in Spanish speaking countries"), and the reasons for using the Web were mostly currency and convenience ("The Web is a brilliant, never-ending resource where there's always more information if you take the time to search for it"). This in a way appears to conflict with their remarks about being unable to overcome problems. The solution to this apparent conflict may be in the type of problems they encounter, which, as we saw, are more of a technical nature; these problems hence may hinder storage of information or make the process of information search longer than they would like, but they do not affect the quality of the information they find or their satisfaction with it. The fact that they persevere ("It gets easier every time I use it") can also be interpreted as a sign of positive perceptions of the Web.

In the section entitled "comparing the web and other sources" we found that nearly 70% of the students prefer the Web to paper-based resources, yet another sign of very positive perceptions of the Web ("It's a modern information source which combines radio/TV with newspapers and makes the world a smaller and more accessible place"). Of those who did not, the most popular

option was "I know where I am with a book or newspaper". That sense of familiarity in paper and fear of being "lost in hyperspace" obviously playing a part ("I get lost using the Web so I know where I am with a book etc and therefore feel more in control of what I'm doing"). Indeed, "I get lost on the Web" was the third most popular reason and "I prefer the library" was ticked by some students. The second most popular reason was a more critical one, the fact that they do not know if the information found on the Web is reliable ("[It is] easier to find information than searching through books but don't know how reliable the information is"). Given that we know now that the source they use the most is online newspapers this wariness seems a little unjustified, as online newspapers are probably some of the most reliable types of source online; but it does reveal critical thinking and evaluation on the part of the students, which is very positive.

The students considered the Web most useful as a convenient information source ("It's the easiest form of finding the info you need that is most current and all in one place"). The responses here are predictable and somewhat mixed, as linguistic issues, such as practising reading are mixed with others relation to reasons for using the Web in general and not as a language learning tool. Perhaps the most interesting reply is the fact that a quarter of the students do find the Web an incentive to access the materials, as it suggests that they may not try to find those materials if it were not for the convenience and currency of the Web ("it is much more likely that I will actually do the work if all the information I need can be accessed from one place"). In addition, we have seen that nearly 70% of students stated that they preferred paper-based resources to the Web ("I have a longer concentration span on the Web compared to reading material, so I hope I'm learning more") and an overwhelming majority of the participants stated that they would want to use the Web again, with only five stating that they would not ("I am anti technology! It is turning us all into a load of morons and 'square eyes'!"). Those five students were consistent in their replies, as they had also stated they preferred paper-based resources.

Related to the students' perceptions of the Web as a resource and therefore as a language learning tool is the question of whether students are aware that they are involved in a language learning activity when using the World Wide Web ("It's quick and easy and reading skills improve without you even realising it"). 67% of the students make notes of new expressions, vocabulary or grammar, but of those only 20% do it before printing.

In the field of CALL, effectiveness is hard to prove by quantitative data. Rather than trying to find evidence of actual language learning outcomes, this study looked at the question of effectiveness from the students' angle, and so measured the issue by asking the students whether they thought they were learning the target language whilst using the Web. Over two thirds of the participants stated that they thought they were learning Spanish whilst using the Web, and this we take as evidence of the high perceptions of the Web as a language learning tool. Of course, it remains unknown just how much Spanish they are actually learning, but that falls beyond the scope of this study.

There seems to be an awareness of the fact that what they are doing is part of their language course, but this is probably perceived in the same way as a trip to the library to collect information: it does not signify they are aware of the language learning processes involved. The fact that they may or may not be perceiving the task as a language learning task is not a fundamental issue in this study, as the main basis for the use of the Web as a resource is the fact that the students are accessing the target language and interacting with it, and our study aimed to find out not whether they like the online language learning tasks the students were asked to complete by their tutors, but whether they find the tool useful for that purpose, which the evidence suggests they do.

5 Conclusion:

Perhaps the best way to conclude our study is to return to the original questions we raised and provide a short response to them with reference to the results we have presented and the discussion of those results.

Do the students know how to use the World Wide Web and make the most of it?

In their majority, they do know how to use it. As we previously saw, most of the students are confident using the Web, consider finding the necessary information relatively easy and do so fairly quickly. Students reported that they find links, menus and icons easy to understand and most can get to the page they want with ease. More than two thirds state that they are not put off by encountering problems. The overall high information literacy scores suggest that indeed they know how to make the most of it.

Do they appreciate the usefulness of the web?

There were extremely positive perceptions of the Web: it was their preferred method of obtaining information and students believe that they are learning Spanish while they use the Web. In addition, the students stated that they were not discouraged by encountering problems. On the contrary, a quarter of the students consider the Web an incentive to access the materials. A very positive response comes from a student who says that searching the Web is a "useful way of learning Spanish at the same time as being fun to use", and another student agrees: "It's useful, fun, easy, convenient etc. And definitely helps my Spanish". Perhaps the student comment that sums up the general positive attitude comes from this student: "It is a comprehensive source of information which can be accessed from a variety of stations; all in all, a huge help and valuable tool for supporting our learning."

These results challenge some of the previous studies reviewed earlier. In 1996 most people could not foresee how much impact the Web would have on the lives not only of university language learners but of a large proportion of the population in Britain. The Web has become part of our lives; a large number of people shop, read, entertain themselves, or make their living online. Universities and the government have spent money making computers and the Internet available to those who do not already have it and provide some training for their use. Our students, and some of us, have moved towards being "native" with computers, with computers becoming a part of our every day lives. There is

where the change lies: most of our students no longer write an essay and then type it at the computer. They write their essays at the computer, spell-check them, find the necessary information online, communicate with others through email. Our students are self-taught computer users, who discover things for themselves and are not afraid of the computer.

Are there any implications for training? The results from the study show that most of the participants manage to obtain the information they need to complete their tasks. This could suggest that training is therefore not a priority. However, this is perhaps too simplistic a view. I believe there is still need for training, which should be part of their curriculum. Online information literacy skills are part of the transferable skills students should already bring in to university from school, or which should at least be developed while they are at university. This training should consist of the necessary navigation skills to enable them to find available information quickly and to ascertain whether the information they are looking for is available at all. In relation to their attitudes towards the Web, it should be stressed in training what the Web can and cannot do, so as to avoid the image of the Web as a source for everything and anything, and to learn to access the appropriate tool (be it paper-based, audio, video, CD-Rom, or the Web) for the appropriate material. We assume from experience that the more they know how to use the Web and what to expect from it, the more the positive view will remain. However, it is foreseeable that the very positive view shown by the participants in our study will not last, as novelty wears off and the disappointments when not finding the required information increase. But if expectations are realistic, positive impressions should not decrease. Moreover, training should teach users to exploit not only the text-based sources online but, for example, chat, audio and video resources.

As we finalise the analysis of the results of the study, a number of issues arise about the methodology, the questionnaire and the scope of the study. It is clear that some questions provide more information than others, and for different areas of the study. Whilst the first set of questions, and most of the "use of the Web" section does not provide much information for data analysis, they remain very interesting as an insight into the variables, context and subjects. Some

questions could have been modified to avoid confusion or to better extract the exact information they aimed to provide. In addition, some new questions could be introduced to provide further information on related issues to the ones already investigated by the study and could have been easily obtained. Other interesting questions could have been asked.

One very helpful addition to the study of learner perceptions of the Web and especially their information literacy would have been to complement the study with recorded observations to provide evidence of the language learning strategies involved in the actual searches rather than just what the students reported. Screen capture software (such as Camtasia) is now available which would make this a relatively easy (in a smaller scale) option.

There is a need for further descriptive work. This study serves as the basis for research into students' reported abilities and attitudes towards the Web as a resource: the study described here was repeated at the same institution in 2003. It is hoped that the results from the replication will confirm the results from the study described here and show what changes have taken place in three years from a longitudinal point of view. It is also hoped that the data may help in analysing the possibility of a relationship between attitudes towards the Web and online information literacy skills. It would also be interesting to measure the success and reliability of the online information literacy skills scale in other studies.

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Appendix: scoring system

A number of questions were selected for their potential to allow us to allocate a score within the scales. Questions 12, 15, 16, 17, 21, 23, and 26 give us the score for online information literacy skills. Next, we will explain how the scores were allocated for each question

Following Warschauer's division of Electronic literacy into four skills we established that questions 12, 15, 16, 17, 21, 23, and 26 covered these areas. Four scores (A to D) were allocated from these questions. Given that some of these questions were of the "yes" or "no" type, and that some answers only provided a certain range of scores, weighting was introduced to allow for the scoring to be as even and fair as possible. Score B was weighted double as it comprised four questions which cover two issues: use of the browser and finding information. Next, we reproduce the questions involved, their weighting and scoring.

A: Question 12: To read what you find on the Web, what do you do? Tick all that apply.

Read everything off the screen = 1
Save the page onto disk and access it later = 5
Scan-read the page to decide whether it is worth printing = 3
Cut what you find useful and paste it into a Word document = 5
Mostly print and read later = 1

B: Questions 15, 16, 17, & 23. Weighted double

15) Is it usually clear what links are available on each page?
16) Do you usually know what menus, icons and buttons do?
17) Do you usually find it easy to get to the page you want?
23) Overall, is the information you need easy to find?

These questions were amalgamated into one score. The replies for each question were added up and the sum of those provided the score using the following formulae:

(4 x Yes) + (0 x No) = 5
(3 x Yes) + (1 x No) = 4
(2 x Yes) + (2 x No) = 3
(1 x Yes) + (3 x No) = 2
(0 x Yes) + (4 x No) = 1

C: Question 21: What do you usually do when encountering a problem? Tick one answer.

Give up = 1
Overcome it = 5
Try later = 3
Ask for help = 3

Although this question was a "tick one answer"-type question, several students ticked more than one. Rather than eliminate those questionnaires, it was decided to simply average the scores for all their answers and divide them by the number of answers.

D: Question 26: How do you find information/resources on the Web for your Spanish classes? Tick all that apply

English search engine (Altavista, Yahoo, Netscape...) = 1*
Online newspapers = 3
Spanish search engine (Olé, Netscape Spain, ...) = 5
Websites you already know = 4
SML "useful addresses" page = 4
Other (please specify) = No score

* Although using an English language search engine may not be considered by some to be a very poor strategy in online information literacy, it is when they only use it that the participants will receive a score of 1. If they use other ways of finding information, their score will go up accordingly.

In addition, another question was used as a control device: Question 18: Overall, do you feel confident using the Web? Yes = 5 No = 1

Although it may seem as though confidence has more to do with attitudes than information literacy, it reflects their reported overall capacity.

This scoring system allowed us to assign a score for literacy skills to each student (and to each different language stage).

A number of questionnaires were eliminated from the final count. The questionnaires from all those participants whose mother tongue is Spanish were not counted because they are not learning Spanish as a second or foreign language. In addition, questionnaires with incorrect (e.g.: more than one tick where only one allowed) or blank answers were eliminated too. In total the number of eliminated questionnaires were:

- Spanish mother tongue 4
- Incorrect or blank answers for online information literacy skills scoring: 10. Total number for this section n = 184.