

Chapter XXIII

Computers and Independent Study: Student Perspectives

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ABSTRACT

This chapter reports on a quantitative study that examines how language students make use of an extensive range of computer-based materials (CBMs) in a language resource centre (LRC) and elsewhere for self-study purposes. Students were asked to indicate the extent to which they make use of CBMs in and outside of an LRC and whether such materials help with their language studies. The study suggests that an LRC offers more than the sum of its parts and therefore should not be put under threat on the basis that materials can and are being accessed anywhere and anytime. The data also reveal that many students, particularly Asian students of English as a Second Language (primarily from China), view a wide range of CBMs as helping with their language studies, and it is suggested that the practices and perceptions of these students may offer insights for all language learners and providers.

INTRODUCTION

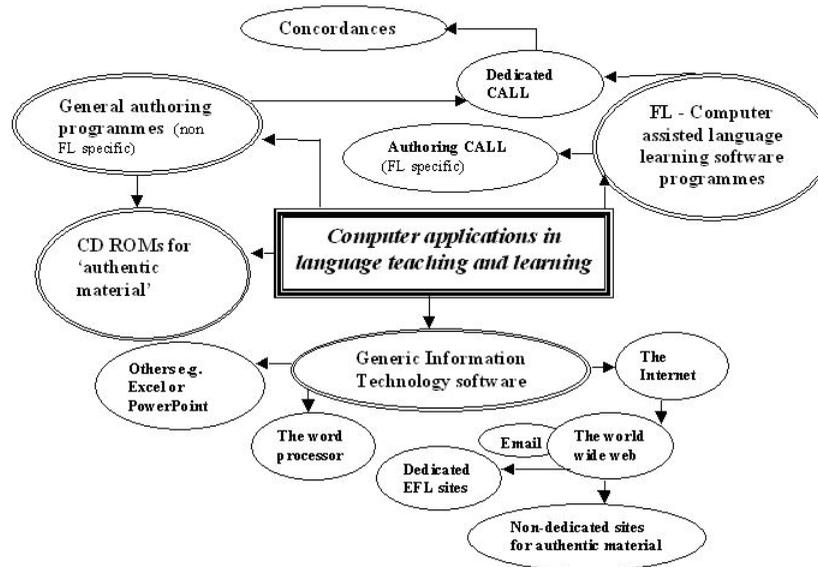
Language resource centers (LRCs) have come to be a prevalent feature in a wide range of contexts in schools, colleges, and universities, or higher education institutions (HEIs). The resources in such centers will typically include paper-based materials such as reference and self-study books, as well as technology-based provisions such as

TVs, videos, DVDs, and, above all, computers and computer-based materials (CBMs). But first, let us define what is meant by CBMs.

Figure 1 (Jarvis, 2004) provides an overview for conceptualizing CBMs in languages.

The types of CBMs that arise out of such a framework have been used in previous studies (Jarvis, 1997, 2004) and typically include the software applications listed in Section 3 of the

Figure 1. A classification framework for CBMs



questionnaire used in this study (see Appendix 1). This includes, among other things, Microsoft Office Suite as well as more language-specific programs. Such CBMs can be seen as tool-based or tutorial-based (Levy, 1997; Taylor, 1980). The former does not have an explicit teaching function; in this sense, the material is neutral and has any number of applications in educational contexts and beyond. In contrast, tutorial-based material has a clear and explicit application to teaching and learning; the material is used in a tutorial capacity for language learning, and such material will frequently, but not always, provide feedback to the student; it can be seen as supplementing and/or replacing some teaching. Inevitably there is, of course, an overlap between these notions with, for example, a word processor that is usually viewed as a tool, but its spell and grammar check have a tutorial role for language students. The Web is usually viewed as a tool that allows students to access information, but some Web-based materials explicitly focus on providing language practice for students and can thus be viewed as having a tutorial function.

While LRCs provide a range of self-study materials, it would be fair to assert (and this is supported by the data in this study) that it is computers and CBMs that dominate. Indeed, arguably they have become the defining characteristic of such centers. In many educational contexts around the globe, it would be difficult to imagine a resource center without CBMs. LRCs are often the showpiece of institutions, and it is the computer facilities and the CBMs they support that provide the kudos.

The advantages of LRCs in general and CBMs in particular are frequently discussed in terms of learner strategies, learner training, and learner autonomy (Pujola, 2002; Smith, 2003). Learner training is about becoming an efficient and effective learner by developing appropriate strategies for learning, whereas learner autonomy is concerned with the capacity to take charge of one's own learning and can be traced back to the Council of Europe's Modern Languages Project established in 1971, and to the work of Holec (1981) and others (Dickenson, 1987; Little, 1989). Learner strategies, to a certain extent at least, can be viewed as the realization of these notions, and

for obvious reasons, resource centers have always been seen as critical to this. In predominantly predigitalized medium days, such centers tended to be referred to as self-access centers, but as digitalized media have become more dominant, this term appears to have been replaced with LRCs, and it is the Internet that allows such digitalized media to be available anywhere and anytime. Whereas self-access centers were often the only place where students could access self-study materials in any quantity or variety, this is clearly no longer the case.

However, despite much work in the field, to date there have been very few studies that examine how today's "digital native students" (Prensky, 2001; Thorne & Payne, 2005), who in many cases have been familiar with digitalized media throughout their entire education and social lives, might actually make use of CBMs in LRCs where so much of the material is also available anywhere and anytime. Nor have there been any studies that examine how the practices and perceptions of foreign language learners of English might differ from learners of other languages, an issue that this study has found to be significant against a background of hegemony, albeit in slight decline, of the English language on the Internet. Indeed, the links between computers and self-study might be characterized as both well-established and problematic. They are well-established in that it is a commonly held view that the two go together. Motteram (1997) notes, "There has always been a perceived relationship between education technology and learner-autonomy [and] this has become increasingly true for computers and self-access" (p. 17). Jarvis (2004) found that many providers of English for academic purposes programs at British universities associated CBMs with self-study contexts. The links are problematic, however, in that there is little in the literature that examines what students actually do in such centers and why; empirical data on the practices and perceptions of learners are noticeably missing, and this chapter is an attempt to address such a shortfall.

THE STUDY

Benson (2001) notes, "The key research questions in regard to technology-based approaches to autonomy are concerned less with the characteristics of new technologies than they are with the learning activities in which they play a role" (p. 141). This has formed the basic premise underlying this investigation. What types of CBMs do students use when they visit the LRC and why? How long will they typically spend in such centers and, in an era where so much material can be accessed anywhere via the Internet, what value do students place on the materials that are made available in an LRC? Are there any significant differences in behavior and perceptions between learners of different languages? And if so, what are the possible explanations and implications?

The LRC

The students in this study had access to the LRC five days a week (Monday through Friday) with typical open hours of 9:00 A.M. to 5:00 P.M. The LRC is not open on weekends, but students have access to university computers seven days a week, 24 hours a day. The LRC facilities include 33 computers, a scanner, and two printers, all of which are available for use in an open access area. When not in use for teaching purposes, an additional 48 computers are available in two other rooms. All computers are equipped for multimedia use. Other facilities include a conference interpreting suite, and a viewing area with 20 televisions and 18 videocassette recorders. Seven foreign satellite channels and five British terrestrial channels are available at any time. Recordings of British, French, German, Italian, and Spanish news programs are made every evening and are shelved in the reading area. Twelve audiocassette booths are available for self-access use with additional booths available for self-study when the language laboratory is not being used for teaching purposes. The reading area includes paper-based

support materials and reference books in a range of languages; the area seats 29 students. The LRC is clearly well equipped and in this respect can be considered state of the art.

METHODOLOGY AND QUESTIONNAIRE RATIONALE

The methodology reported here employs quantitative techniques; a Likert scale questionnaire (see Appendix 1) was distributed to generate data that were then used to identify statistically significant trends. The questionnaire inevitably reflects the software material that is available to students in the specific LRC; however, it is felt that such programs can be considered typical but not necessarily exhaustive of CBMs found in many LRCs in a range of contexts. The questionnaire directly asks “Does this help you with your language learning?” in order to draw on the tool\ tutor distinctions and gauge student perspectives. The significance of this distinction lies in the fact that historically one of the important justifications for LRCs is that they allow students to work in a dedicated area on materials that have a specific tutorial role.

Limitations

Any study of this type has inevitable limitations, and we have already noted the questionnaire is LRC-specific. Furthermore, it restricts choices and does not allow for more personalized responses. The final section of the questionnaire allows for the possibility of a second phase of research, which it is envisaged will allow for more detailed insights from a smaller cross-section sample. A further qualitative-based study will allow the researcher to get closer to the meanings, views, and feelings of the participants. An additional limitation is that not every participant fully completed every question, and rather than exclude these, a conscious decision was made to include them whenever possible. For

this reason, the total number of participants (N) is given, which is then converted into percentages to allow for some comparison. However, the total numbers from some regions are relatively small, and this, combined with inevitable space limitations, has meant that with regard to the contrastive feedback of CBMs (mainly in Section 3 of the questionnaire), only the most numerically significant two groupings of international Asian and British students are presented and included for discussion. The former group was largely learners of English, and the latter group was learners of other languages.

A study of this type is bound to produce a large amount of data, and where particularly relevant, this is presented and discussed within the text itself. However, a more detailed breakdown of the views of different groupings is documented in Appendix 1.

Participants

A total of 105 students participated by completing the questionnaire, which was randomly administered in the LRC over several months during the semester periods and the summer school of the academic year in 2005. Participants came from a range of academic and international backgrounds and included native and non-native speakers (NNS) of English. The two largest groupings came from British language learners studying a variety of languages and Asian learners, primarily from China, studying English. These two groupings represent 63% of the total participants, and with a roughly even split between the two, the sample sizes can be considered statistically significant for comparative purposes. For logistical reasons, participants are classified into regional rather than national groupings. Within the international students from Asia, those from China form 23 out of the total of 30, which includes X2 from Taiwan and X1 from Hong Kong. Of the remaining seven, the breakdown is as follows: X2 Thai, X1 Vietnamese, X1 Korean, X1 Japanese, X1 Pakistani, and X1 Indian.

Table 1. Program type and nationality background of participants

Program Type	Regional Nationality Groupings					
	Asian	British	Other European	Middle Eastern	African	Central and North American
BA	3	33	15	4	4	2
UWLP	1	1	1	0	0	1
IFY (EFL)	2	0	0	0	2	0
DME (EFL)	7	0	0	0	0	0
ESP (EFL)	17	0	2	4	6	0

The languages studied are Arabic, French, German, Italian, Portuguese, Spanish, and English as a Foreign Language (EFL), which included an undergraduate access program in the International Foundation Year (IFY) and a postgraduate access program in the Diploma in Management English (DME). Also included is the more general pre-sessional access program in the form a term-time and summer English Study Programme (ESP). Fifty-eight percent of respondents were on a BA language program (levels 1, 2, or 3), 4% were on the University Wide Language Programme (UWLP) and were therefore taking a BA or BSc in another subject with a language forming a minor 20-credit module of their program in that particular academic year, and the remaining 38% were on a range of EFL access programs. The breakdown of regional backgrounds and programs followed is illustrated in Table 1.

This sample represents a wide internationally based cross-section of students. The data are not specifically discussed from the perspective of various program types such as BAs in modern foreign languages or EFL access programs, but it is clear that there is considerable overlap between this and the nationality breakdown, with most British and other European students on a BA program and most international Asian students on an EFL program that would then lead on to any number of programs offered by the university, once they have reached the required level of English. The

program split between Middle Eastern and African participants is more evenly balanced.

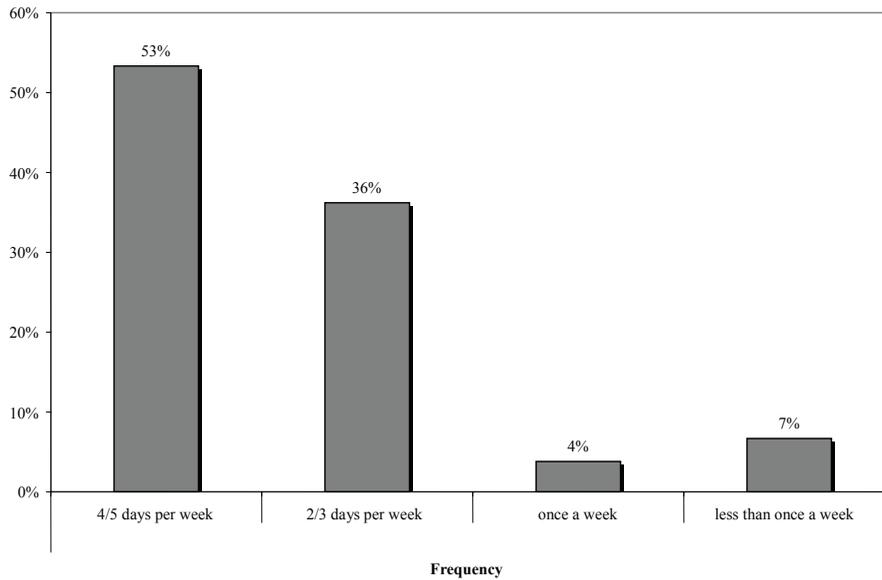
RESULTS AND DISCUSSION

Orientation and Frequency of use of the LRC

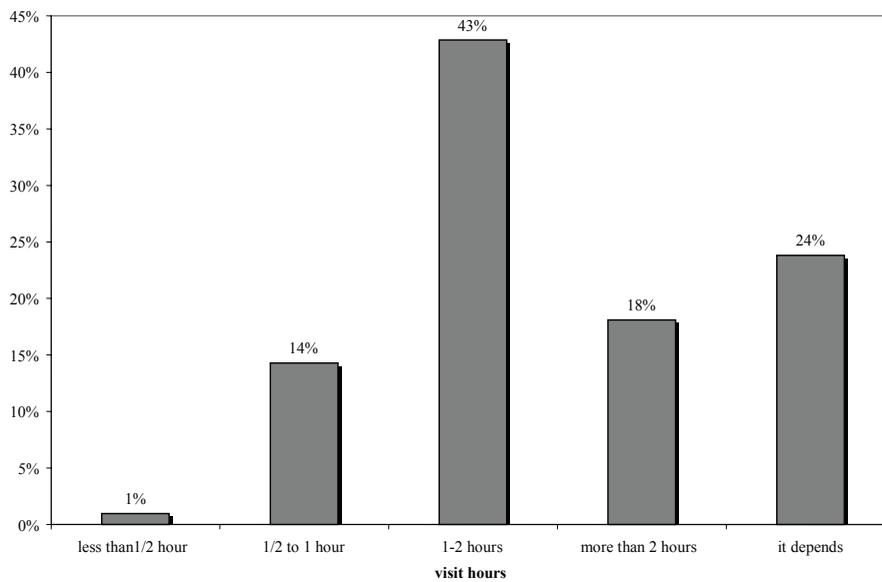
Sixty-seven percent reported that the LRC was “very important” to their language studies; with 23% reporting it as “important” and 10% as “quite important,” we can conclude that all students clearly recognize the value of such a center. Furthermore, with 90% of respondents reporting they had been shown around the LRC, and 81% reporting they had specifically been shown the CBMs, we can also conclude that the vast majority of users were in a position to make informed choices about what materials to use when visiting the LRC for self-study. The following bar charts indicate that the students in this sample made frequent use of the LRC and usually spent anything from more than half an hour to more than two hours per visit.

The data suggest that students see the LRC as an integral part of their academic studies; in a typical academic week, they make frequent use of it and use it for fairly extensive periods of time. When students visit the LRC, they do not seem to do so to complete a quick task such as sending

Graph 1. Frequency of visits to the LRC (Q2.3)



Graph 2. Time usually spent in the LRC (Q2.4)

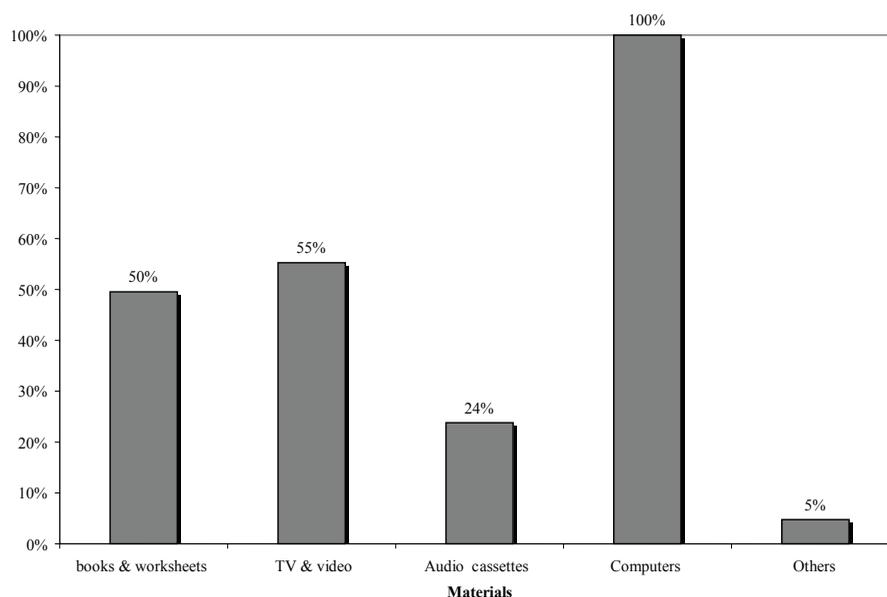


a quick e-mail; rather, they appear to block time in order to make extensive use of the facilities available. This suggests that the LRC is viewed as a physical place for focused and intensive work, and to this extent, it would seem to be meeting its primary remit. The study found no differences in this respect among the various groupings.

Materials Used

When asked to provide feedback on what materials are used, the primacy of CBMs is clear to see from the following bar chart.

Graph 3. Materials used in the LRC (Q2.5)



Self-study materials in paper-based form or analog image and audio are far less popular than the text, hypertext, and digitalized media offered by the computer. It is here, however, where differences among groupings can be seen. Table 2 indicates a number of differences with regard to materials used by various groupings.

Explaining these differences is problematic due to the range of variables. With traditional video materials and audiocassettes, availability in a variety of languages and at appropriate levels as well as the suitability of material for self-study is

not equal across languages and programs, which makes any comparisons impossible as we would not be comparing like with like. However, paper-based materials (e.g., books and worksheets) are stocked in the LRC for all languages and all program types, and for this reason, it is worth noting some of the differences. International students from Asia do not make as much use of such material as students from Britain, and it may be the case that such students are from learning backgrounds where they have not previously used such material. It could be that notions of

Table 2. Materials used by various groups

Q2.5 Materials used	Books & worksheets	TV & Video	Audio cassettes	Computers	Others
Asian (N:30)	13%	40%	10%	100%	3%
British (N:34)	68%	59%	21%	100%	3%
European (N:18)	83%	83%	39%	100%	6%
African(N:12)	25%	33%	25%	100%	17%
Middle East (N:8)	63%	50%	38%	100%	13%
Central and North American (N:3)	67%	100%	100%	100%	33%

independent study, particularly using a variety of media that include paper-based ones, are far less familiar to this group than to their British counterparts. In the age of digitalized media, paper-based predecessors may have passed this group by. Are such students behind or ahead? The question that arises for English providers in LRCs is whether they should encourage learners to use a fuller variety of media or not. The answer to this question is beyond our remit here but will clearly depend on one's view regarding the integration of media in relation to the inevitably diminishing role of paper-based materials.

Computer Uses

Let us turn to the use of CBMs both inside and outside the LRC (in a university library, at home, etc.). What is being used and to what extent is such usage perceived as helping students with their language studies?

Online Dictionaries

Online dictionaries are used by a majority (67%) of learners on "every, most or some visits," and with a combined total of 71% of learners reporting that they help "a lot" (44%) or "to some extent" (27%) with language learning, the value of this material is widely recognized. The assertion by Candlin (1998, p. xiii) that "the study of vocabulary is at the heart of language teaching in terms of ... the provision of learning resources" would seem to be true of this particular resource and widely recognized by the vast majority of learners. The data suggest that international Asian learners use and value this material more than British and other European students, some of whom are not convinced that it helps with their language learning. With an average of 62.9% of all students reporting making use of online dictionaries outside the LRC, there would appear to be no major differences between usage in the center and elsewhere.

E-Mail to Contact Tutors and/or Classmates

The use of e-mail to contact tutors and classmates can be considered an academic application as opposed to a social application such as contacting friends and family (although there is, of course, an overlap with some students likely to contact classmates for social rather than academic reasons). The frequency of use figures are similar to online dictionaries but, not surprisingly perhaps, fewer students see this application as directly helping with language learning, and it doesn't have the same tutorial role as online dictionaries. Despite this, however, it is worth noting that 59% of international Asian learners do view this as helping "a lot" or "to some extent" with their language studies compared to only 36% for British students. We will return to a discussion of this when we come to live chatting in the next section, where the different perceptions between the two groupings is even greater. The data on frequency of use indicate that 77% of international Asian students, compared with only 21% of British students, use this material on every, most, or some visits. This is a significant difference and can probably be accounted for in terms of how these groups view this as helping with their language learning. However, there may be other possible explanations. It may be that international Asian learners are more teacher and/or peer group dependent and thus make more frequent use of e-mail to contact these groups; and/or they might be more inhibited about alternative forms of communication such as face-to-face (i.e., asking questions during or after lectures).

The advantages of computer-mediated communication (CMC) over face-to-face communication for language learners are well documented (Warschauer, Turbee & Roberts, 1996), and these results tend to suggest that international Asian students recognize such advantages. An implication for HEI practitioners who may sometimes struggle to get their students to communicate

directly in face-to-face situations might be to encourage more systematic use of e-mails from such students when they have left the lectures and are working independently. As with online dictionaries, we can see that the vast majority of students, irrespective of learning background, reported also making extensive use of this application outside the LRC.

Live Chatting to Friends and/or Family and to Tutors and/or Classmates

The value attached to synchronous e-mails or live chatting in social contexts is generally more or less the same as it is for academic contexts. However, if we compare the frequency of use, some interesting and potentially significant variations can be noted. A total of 81% of users reported never or only occasionally using this facility in academic contexts when visiting the LRC, compared to 65% for social contexts. Chatting in LRCs is not found to be common practice, and perhaps oddly, it is particularly uncommon when applied to an academic context. Arguably, such chatting is inevitably social in nature, but it is also almost certainly the case that the long-established tradition of lecturers posting drop-in surgery times on their office doors has not been extended to virtual meetings.

As with asynchronous e-mails, there are considerable differences among learner groupings in terms of the value attached to such activity, which is particularly evident with the two groups that have formed the primary basis for comparison here. British students value chatting in order to help with language learning far less than their international Asian counterparts. It is worth stressing here that international Asian learners are largely reporting on their studies of the English language, with British students reporting on their studies of another language, and this factor is the most likely explanation for such huge differences. But why is this and what are the possible implications?

The significance of live or synchronous CMC cannot be understated, and it has a pedagogical perspective for all language students; for NNS, it has an added sociopolitical element. From the pedagogical perspective, Freiermuth and Jarrell (2006) have shown that this activity among NNS reduces anxiety, improves output, and adds to learner control. These findings have been supported in a number of other studies (Kitade, 2000; Payne & Whitney, 2002). LRC providers may perhaps discourage such activity because it is viewed as not helping with language study and distracting from more academic application of CBMs. However, in light of the research evidence cited previously and the perspectives of the international Asian students participating in this study, this is a view that should be challenged. Indeed, LRC providers perhaps ought to be finding ways to encourage meaningful chatting in the target language in self-study contexts for all students as well as finding ways to bring lectures on-board in terms of posting availability in virtual contexts. From the sociopolitical perspective, CMC in particular and the Internet more generally raise a number of challenges and issues for languages in terms of how they classify their NNS, the English language itself, and their resulting support programs. Graddol (2000) found that more than 80% of information stored on the Internet is in English, and that there are now more non-native than native users of English in the world. Much of the communication among such users is likely to be conducted over the Internet and in English. The use of and the perception of CMC by the NNS in this study lends support to the suggestion made by Jarvis (2006) that it is no longer helpful to classify such NNS of English as “foreign” (EFL) or “second” (ESL) language learners. Jarvis points out that this newly emerging use of CMC is in English as a lingua franca and argues that it is time to embrace a more democratic notion of shared ownership of language from an English as global (EGL) or international (EIL) language perspective. Furthermore, it is also noted that this change has

profound implications for the type of language being generated (netspeak) and its conventions (netiquette). Despite some important work in this area (Crystal, 2001), further research would help to better inform the broader academic community who may be unclear as to what constitutes acceptably correct English in academic discourse of this type; it is suggested that appropriateness over and above grammatical accuracy will be an important element of any such study.

The data clearly indicate that international students from Asia make more frequent use of synchronous e-mail for both social and academic purposes and view such uses as helping with their English language learning; this contrasts considerably with British learners of other languages. As with other CBMs, all students report making use of this synchronous e-mail outside the LRC with international students from Asia making significantly greater use than other groups.

The World Wide Web

The questions for this section were formulated so as to obtain responses to three types of CBMs available on the Web. Web sites that provide language practice exercises have been characterized as “dedicated Web sites” in that they are designed specifically for language learners, in contrast to “nondedicated Web sites” that have no explicit language teaching or learning role (Jarvis, 2002). The former have a clear and explicit tutorial function, while the latter serve as a resource for authentic language material, be it academic (material used for study purposes) or personal (any material used for nonacademic purposes). In both cases, such Web sites contain authentic language that hasn’t been scripted or simplified for the learner. The responses to these three questions about Web material are perhaps predictable. Dedicated Web sites with a tutorial function are used by most students and widely recognized as helping with language learning; this is also true, but to slightly varying degrees, for Web sites with academic information.

There appear to be some significant differences between British and international students from Asia regarding Web sites for personal information. Such sites are clearly used more frequently by international students from Asia and are seen as having more of a language learning value. This is probably explained in terms of the hegemony of the English language on the Web, and once again, as previously suggested, this contributes to the case for a reformulation of the EFL\ESL paradigm. When Web sites are developed anywhere in the world, if they are going to have a global presence, the language is English, and yet such sites may well be developed by and read by a majority of NNS of the language.

With regard to usage outside the LRC, students do not appear to differentiate between certain usages as being more relevant to non-LRC contexts, and this would seem, on the surface at least, to partially undermine the argument for an LRC as a unique place for self-study. The World Wide Web is being used everywhere and taken in isolation; arguably, there is no reason why HEIs should provide unique locations for activities that can be conducted in a university library or from home. We will return to this later.

Library Catalogs and Other Electronic Resources

This type of material is clearly resource-based rather than having any explicit or even implicit tutorial function. In this sense, it is a means to an end and is thus used less frequently by all learners. That less use is made of such resources outside the LRC is probably because some of these resources can only be accessed on campus and not from home. It is also worth noting that international students appear to place a much higher value on the extent to which such resources help with language learning, and, as with Web sites, this is probably because the sites for accessing as well as the material being accessed is largely in English.

Blackboard to Develop Independent Language Learning

Blackboard (<http://www.blackboard.com/>) is the HEI's Virtual Learning Environment (VLE), and all language students have access to a site aimed at *Developing Independent Language Learning* (DILL). The material posted on this site includes generic study skills suggestions, administrative program material, as well as generic and language and/or course-specific discussion forums. Some courses require students to proactively engage in DILL by including an assessment element. DILL can be accessed anywhere and at any time, although some of the suggestions will encourage students to make use of non-CBMs, which are sometimes only available in the LRC. The vast majority of students, irrespective of nationality grouping, appears to make regular use of this facility and to value it in their language studies. With just more than 30% of all students using this outside the LRC, it would seem that students are, perhaps understandably, associating DILL with the LRC. However, one of the big advantages of VLEs is that by definition they are not location-specific, and a challenge might be to encourage students to recognize this by making more frequent use of DILL beyond the LRC.

The Word Processor, PowerPoint, and Excel

Course work assessment in languages, as in many other academic subjects, is almost invariably by word-processed assignment, which is clearly reflected in the word processing data. Presentations that require PowerPoint and dissertations that may involve data collection and collation using a package such as Excel are far less common, which is reflected here. The word processor is widely used and highly valued. From the data, it would seem to be serving a dual purpose as both a tool for the writing of assignments and as a tutor in assisting in this through spell and grammar checks.

Furthermore, as one might expect, it is by far the most widely used application by all students outside the resource center. The resource center is seen as just one of several places where such CBMs might be used.

Can 8 for Oral Summary Work and Other Computer-Assisted Language Learning Materials

Can 8 (<http://www.can8.com/>) is somewhat atypical of all the CBMs discussed here in that it is an example of dedicated authoring software that is designed for languages, practitioner's input, and then track responses to exercises. Furthermore, it is location-specific in that students must access this software in the LRC, and it is also program-specific in that it provides oral summary work for level 3 (third -ear) BA language students. Other computer-assisted materials are comprised largely of commercially dedicated packages, some of which are only available from the resource center, while others are also available on campus. In many ways, such packages are the idealized rationale for CBMs in LRCs in that they are location-specific and explicitly tutorial-based. The positive feedback can certainly be seen as an endorsement for such material being made available in such centers. However, it is also clear that with a program such as Can 8, it is important to provide a consistent provision across all languages; the few students who reported that it didn't help with their language learning were all studying the same modern foreign language, and it is possible that they were not getting the same type of materials to work on as their colleagues; this would seem to be an issue of staff training, an important factor but one that is beyond our remit here.

In recent years, there has been a shift away from such tutorial resources, as they were regarded as being boring, mechanical, and based on outdated behaviorist notions of pedagogy, sometimes characterized as "drill and kill." However, Hubbard and Siskin (2004) have argued for a reassessment

of this shift, and the results of this study suggest that from the student perspective, such material is highly valued.

Uses Inside and Outside the LRC

We have already compared specific CBM usage inside the LRC with those elsewhere, and we have noted that in general there are similar patterns of behavior irrespective of location and that where differences do occur, there may be pragmatic explanations. The following graphs provide collated totals for uses outside the LRC across languages and between our two main groups of language learners.

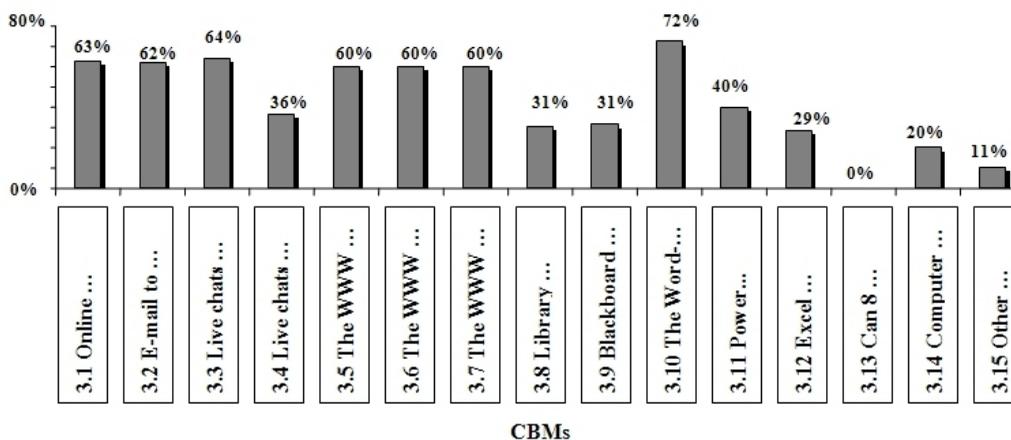
OVERALL IMPLICATIONS

This study has produced a number of findings that undermine a view, sometimes heard among sceptical practitioners, that students do not use computers for the purposes for which they were intended when visiting an LRC. The results clearly suggest that students are using CBMs in the LRC and beyond in order to specifically develop their language skills. There is usually a direct correlation between frequency of use (“some, most, or every visit”) and the extent to which the material

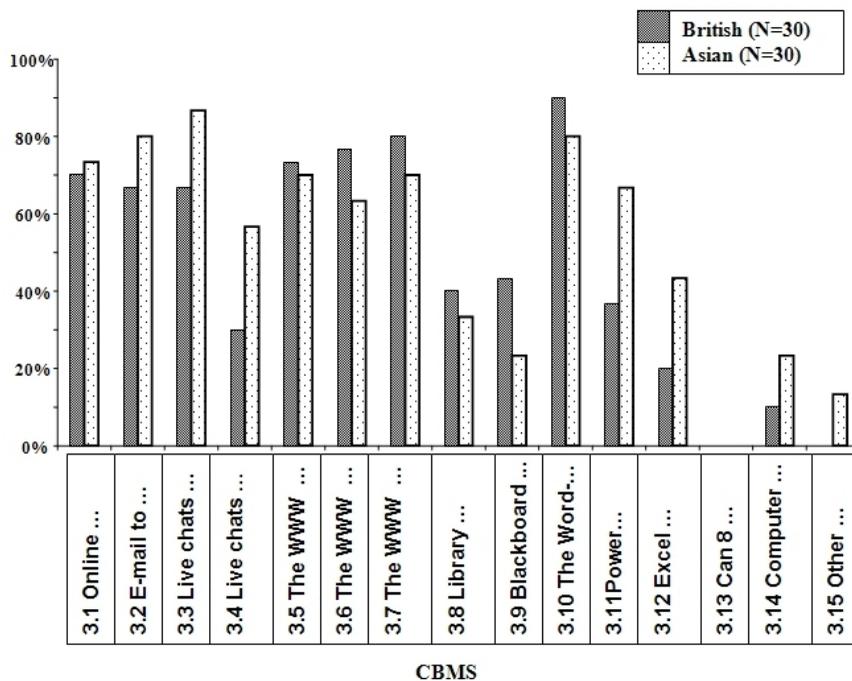
is viewed as helping with language learning (“a lot” or “to some extent”). Unsurprising as these findings might be, they are nevertheless worth recording; when taken as a whole, the data provide sound evidence for language providers who are looking to set up and/or further develop such facilities. The data suggest that language providers should strongly resist any pressure to cut LRC provisions on the basis of an argument that they are not being used effectively or that they are not valued by today’s students.

However, a number of more problematic issues do arise out of this study. There is indeed frequently little to differentiate student use of CBMs for self-study purposes inside the LRC with their use outside of it, except where access means that materials are not available; any case for continued provision surely needs to go beyond the argument that students use and like LRCs. The argument that there is little rationale for an LRC when so much of the material can be and is being used elsewhere (i.e., at home or in a library) needs to be addressed. By way of addressing this, it is worth noting that the function of the LRC is not exclusively to provide CBMs; many are also used for teaching purposes as well as providing a range of other facilities such as paper-based materials and satellite TV, and it is the integration of functions that gives them added value.

Graph 4. Computer uses outside the LRC (Q4, N=97)



Graph 5. Computer uses outside the LRC by British and international Asian students (Q4)



Students clearly *do* appreciate and use CBMs for self-study purposes over and above other media in LRCs, and when these materials are provided in such location-specific places, students make sensible use of them; for example, by blocking their time and engaging in activities that are perceived as helping with their learning. To this extent, LRCs provide *the* ideal environment for developing learner autonomy. The argument here is that in combination with everything else that an LRC has to offer, the physical location actually encourages such focused practices. It is thus suggested that CBMs in LRCs need to be seen as offering more than the sum that their individual parts might be able to offer elsewhere, which is particularly evident where students are specifically encouraged to focus their activity, as seen with the DILL initiative.

Although there is sometimes little to differentiate the practices and perceptions of learners from different backgrounds, where differences do occur, lessons perhaps can be learned, first in terms of the role of English as a global or inter-

national language for accessing and sending and receiving information and how the profession of language practitioners needs to stop viewing international students as foreign or second language learners. Second, many international students do not appear to recognize the long-established distinction between CBMs as being either tool or tutorial-based. From the point of view of the many learners, particularly NNS, it would seem, perhaps understandably, that working with all kinds of materials on the computer is generally viewed as helping with language learning. Where this is sometimes less evident, for reasons we have already discussed, is with British students learning a language that is not English. But there are lessons here that can be learned from international students and their experiences of dealing with the language of the Internet. The hegemony of English on the Internet, although still prevalent, has recently been found to have decreased (Graddol, 2006), and with this there has been a corresponding increase in other languages. This may provide an ideal opportunity for English

learners of other languages to embrace a wider range of opportunities for language learning and development, which many international students appear to have already recognized in their study of English. With some CBMs, such as live chatting, it may be that practitioners and LRC providers should find ways to encourage more proactive engagement with such material. There are good reasons for viewing the use of CMC in the target language as helping with, rather than distracting from, language learning.

Furthermore, the view of international students that a wider range of CBMs and not just tutorial-based ones help with their language learning may help reopen a much discussed differentiation between language learning and language acquisition that dates back to the work of Krashen (1982). In an electronic-based environment, language students have access to a wide range of authentic material and the means to contact others via CMC; there may be no explicit learning, but we have seen that some learners do view such activities as helping with their learning. Tutorial-based CBMs allow for focused, conscious, and explicit learning. In contrast, tool-based CBMs, frequently in an online environment, lend themselves to less focused, unconscious but implicit language acquisition through exposure to and use of the target language. It is beyond our scope here to fully develop this potentially useful differentiation, but it may be that notions of e-second language acquisition and e-second language learning can provide us with a framework within which to conduct further research.

CONCLUSION

This study has generated a considerable amount of quantitative data; it has painted a generally positive picture of student practices and perceptions but has also raised a number of issues for further consideration and investigation. Further, more qualitative oriented research would certainly

contribute toward identifying individual reasons and thinking behind choices. Kern (2006) observes that “the complexity of the issues involved in technology and language learning is pushing us to ... understand the effectiveness in terms of the specifics of what people do with computers, how they do it, and what it means to them” (page 189). Despite some advancement here, it remains the case that the role of CBMs in relation to LRCs and issues of learner autonomy remains an underexplored area.

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KEY TERMS

Computer-Based Materials: All software programs that run on a computer.

Computer-Mediated Communication: The use of computers as a medium of communication among people.

E-Acquisition: Unconscious learning in an electronic environment.

E-Learning: Conscious learning in an electronic environment.

Learner Autonomy: A capacity to take charge of one's own learning.

Language Resource Centers: Physical places equipped with materials that can be used for self-study purposes by language students. Electronic-based materials are likely to dominate such centers.

Self-Access Centers: Physical places equipped with materials that can be used for self-study purposes by language students. Paper-based materials are likely to dominate such centers.

APPENDIX 1. QUESTIONNAIRE (INDICATIVE) AND RAW DATA FOR COMPUTERS IN LRC

Language Resource Center (LRC) Student Questionnaire

Dear School of Languages Student,

The purpose of this questionnaire is to investigate the ways in which you choose to use computers in the LRC. Please complete it honestly. For this first stage of the investigation, you are not asked to give your name, and the information provided will not be attributed to you personally. However, a second stage of this investigation is to meet a sample of students and interview them about how they use the LRC, and a third stage will look at as many overall course grades as possible. Please indicate whether you are willing to be interviewed and/or have your grades made available to me in the further information section at the end of this questionnaire.

Huw Jarvis
EFL Lecturer and Researcher in the Higher Education Research Centre

1. You and your course: ✓ (check one)

___ BA -> _____
(insert degree title)

___ University-wide Language Program -> _____
(insert language)

___ International Foundation Year (IFY)

___ Diploma in Management English (DME)

___ English Study Program (ESP)

Computers and Independent Study

When did you start studying on the above course? _____ (insert month and year)

What is your nationality? _____

2. The LRC

2.1 How important is the LRC to your language studies? ✓ (check one)

_____ very important _____ important _____ quite important _____ not very important _____ not important

2.2 Have you been shown what is available at the LRC? ✓ (check one) ___ Yes ___ No

2.2.1 Were you shown the computer-based materials available for language learning?

_____ Yes _____ No

2.3 In a typical week during the semester, how often do you visit the LRC? (✓ check one)

_____ 4 or 5 days per week _____ 2 or 3 days per week _____ once a week _____ less than once a week

2.4 For each visit, how long do you usually spend in the LRC? (✓ check one)

_____ less than ½ an hour _____ ½ to 1 hour _____ 1-2 hours _____ more than 2 hours _____ it depends

2.5 Which materials do you usually use when you visit the LRC? (✓ check as few or as many as you want)

_____ Books and worksheets _____ TV and video _____ Audiocassettes _____ Computers

_____ Others (please specify _____)

3. Computers in the LRC

Table A1. Indicative table used in the questionnaire

Computer uses	Circle one number to complete the sentence: "I use computers in this way on ___ to the LRC." 1=every visit, 2=most visits, 3=some visits, 4=occasional visits OR 5= I never use computers in this way when I visit the LRC	Does this help you with language learning? Circle one number. "It helps ___" 1=a lot, 2= to some extent, 3=a little, 4=very little, 5=It doesn't help OR 6=I am not sure if it helps my language learning
3.1 Online dictionaries	1 2 3 4 5	1 2 3 4 5 6

Results

Table A2.

Computer Uses (N=)	1) Every visit (%)	2) Most visits (%)	3) Some visits (%)	4) Occasional visits (%)	5) I never use ...in this way (%)	Does this help you with language learning? N=	1) A lot (%)	2) To some extent (%)	3) A little (%)	4) Very little (%)	5) It doesn't help (%)	6) I am not sure if it helps ... (%)
3.1 Online dictionaries (103)	17	22	28	17	17	95	44	27	14	4	3	7
Asian (30)	30	17	27	13	13	29	48	31	10	3	0	7
British (33)	9	21	30	24	15	32	34	25	19	6	6	9
3.2 E-mail to contact tutors and/or classmates (104)	13	24	28	29	7	98	24	21	28	10	7	9
Asian (30)	23	27	27	17	7	29	28	31	24	10	0	7
British (34)	3	18	35	41	3	33	15	21	24	15	12	12
3.3 Live chats with friends and/or family (102)	10	11	15	17	48	92	12	14	15	11	26	22
Asian (30)	14	17	28	24	17	29	28	24	17	14	0	17
British (31)	6	13	6	10	65	28	0	11	11	14	43	21
3.4 Live chats with tutors and/or classmates (103)	5	7	7	23	58	90	11	18	10	13	28	20
Asian (30)	10	13	13	43	20	29	24	31	17	14	3	10
British (33)	0	0	6	15	79	26	0	8	8	15	38	31
3.5 The WWW to access sites with exercises to practice language (104)	29	26	32	12	2	96	46	34	8	8	2	1

table continued on following page

Computers and Independent Study

Table A2. continued

Asian (30)	37	23	30	10	0	29	59	31	7	0	3	0
British (33)	27	21	33	18	0	32	34	47	9	9	0	0
3.6 The WWW to access academic information (102)												
	20	46	28	4	2	95	44	37	11	4	2	2
Asian (30)	20	50	27	3	0	30	43	47	7	3	0	0
British (33)	18	42	36	3	0	31	55	19	16	10	3	0
3.7 The WWW to access personal information (104)												
	24	25	28	16	7	94	26	19	21	11	14	10
Asian (29)	21	28	38	14	0	29	30	20	27	13	3	3
British (34)	15	29	32	18	6	31	16	23	16	10	23	13
3.8 Library catalogs and other electronic resources (103)												
	9	17	37	24	14	93	19	35	22	10	11	3
Asian (29)	7	18	32	32	11	29	20	40	20	10	7	0
British (33)	6	18	30	24	21	30	13	30	13	13	23	7
3.9 Blackboard to develop independent language learning (98)												
	17	22	28	13	19	92	29	23	22	11	7	9
Asian (29)	10	24	31	17	17	29	20	20	27	10	7	10
British (33)	12	27	30	3	27	31	32	23	16	10	10	10
3.10 The word processor to write assignments (102)												
	25	39	25	9	2	97	47	28	11	6	2	5
Asian (30)	17	47	23	13	0	30	23	40	13	10	0	7
British (34)	26	26	35	9	3	33	58	18	12	0	6	6
3.11 PowerPoint to work on presentations (103)												
	8	4	21	31	36	94	21	17	14	15	17	16
Asian (30)	13	7	33	30	17	30	23	23	13	23	7	7
British (33)	0	0	15	30	55	29	7	21	17	7	34	14
3.12 Excel to present and collate data (98)												
	6	5	19	17	52	88	19	10	15	15	16	25

table continued on following page

Table A2. continued

Asian (28)	11	4	29	25	32	28	13	13	17	13	7	23
British (33)	3	6	12	6	73	25	12	8	12	12	36	20
3.13 Can 8 for oral summary work (17)												
	24	35	18	18	6	17	53	35	0	0	12	0
Asian (1)	0	0	100	0	0	1	0	100	0	0	0	0
British (9)	33	22	0	33	11	9	67	11	0	0	22	0
3.14 Computer-assisted language learning materials (56)												
	18	41	27	7	7	50	54	24	20	0	0	2
Asian (25)	20	52	20	8	0	23	20	52	20	8	0	0
British (12)	8	25	33	8	25	10	8	25	33	8	25	10
3.15 Other computer applications (17)												
	6	24	24	12	35	14	7	64	0	7	14	7
Asian (7)	0	29	29	14	29	7	0	86	0	0	14	0
British (4)	8	25	33	8	25	3	8	25	33	8	25	33

4. Which of the above do you use outside the LRC? (e.g., at home, in the library, etc.)

Please check (✓) each item that you use. ___ 3.1 ___ 3.2 ___ 3.3 ___ 3.4 ___ 3.5 ___
 3.6 ___ 3.7 ___ 3.8 ___ 3.9 ___ 3.10 ___ 3.11 ___ 3.12 ___ 3.13 ___ 3.14 ___
 ___ 3.15

5. Further information: Please check (✓) OR cross (X) each box below.

<input type="checkbox"/>	I am willing to be interviewed about my responses.	My full name is E-mail (Leave blank if you have checked both boxes)
<input type="checkbox"/>	I agree for the program leader to make my course grades available to you.	

I understand that even if I check either of these boxes, all information will be treated as confidential and that I will not be personally named in any reported findings.

Thank you for finding the time to complete this questionnaire.

February 2005