SUPPORTING SELF-DIRECTED LEARNING THROUGH AN ELECTRONIC LEARNING ENVIRONMENT

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Abstract

This article describes a project carried out at one University in New Zealand aimed at supporting students in their self-directed language learning with the help of an Electronic Learning Environment (ELE). The programme was designed for use in the University's Self-Access Centre and contains a number of features that support learners at different stages in their self-directed learning process. It encourages learners to reflect on their learning and it monitors their use of the resources in the Centre. It prompts for mismatches between identified needs and use of the language learning materials and also identifies and warns the students for slow progress in relation to their language learning goals.

This article first describes the ELE and then reports on the results of a study which investigated how learners make use of the programme. Usage was monitored by retrieving electronic records of 1,200 users of the programme over the course of one year. This provided information about which aspects of the ELE students used, what materials they accessed and whether they used the features of the programme designed to assist them in their self-directed learning. This data was compared with information obtained through short interviews, a questionnaire and observations of students' language learning behaviour when interacting with the programme. The results suggest that for a variety of reasons students did not make full use of the features of the programme designed to help them, even though they were clearly in need of improvement. Design features of the programme may have had an effect but the findings also suggest that a lack of metacognitive skills

on the part of the students may have played a role. This resulted in the students sometimes being unable to respond meaningfully to the programme's prompts and suggestions. This highlights the importance of (even more) intensive (staff) support, especially in the beginning stages of the students' independent learning process. Clearly, students need certain skills for self-directed learning in order to further develop their skills.

Background

The University of Auckland is the largest tertiary education provider in New Zealand. Nearly 35% of its students have English as an additional language (EAL). Officially, a distinction is made between international students on the one hand and citizens and permanent residents on the other. Most EAL students belong to the latter group and come from a variety of ethnic and linguistic backgrounds, including Asian (mainly Chinese and Korean), Indian and Pacific Island. Unlike the international students who need proof of their English ability either by having studied through the medium of English or in the form of an English language test score (e.g. IELTS or TOEFL), most EAL students do not have to meet any language requirements for entry into the University.

Many of the EAL students have difficulties in their studies due to their English. Understanding lectures, writing within an academic genre and reading academic texts are only some of the skills that pose problems. Lecturers complain that essays and theses (even at postgraduate level) are unintelligible due to English language. For these reasons, many students deliberately construct a pathway through the curriculum that places the least demand on their English abilities. This means for example taking courses in (other) Asian languages, or taking classes that do not require written work. An additional problem is that many students have very demanding study programmes that leave little if any time for the systematic development of the necessary language skills.

In response to this, the University has developed a number of initiatives, one being the establishment of a Self-Access Centre (SAC). The SAC provides a flexible option, by allowing students to come when it suits them and to work at their own pace on skills important to them. An important aspect of self-access is the (sometimes implicit, sometimes explicit) aim to foster autonomy through the development of independent learning skills, awareness raising, strategy instruction and in a variety of other ways (cf.

Reinders, Hacker and Lewis 2004, Reinders 2005). However, several practitioners have pointed out that providing opportunities for self-access language learning in itself is not sufficient. Paraphrasing Benson and Voller (1997), one cannot force learners to become autonomous, and by placing them in a self-access environment, one certainly doesn't ensure this will happen.

The aim of the ELE is not then, to impose autonomy on our students, but by encouraging reflection and planning, by monitoring and offering them support, to foster a context in which students will become accustomed to a different, more proactive approach to their learning.

Supporting self-directed learning

This volume is witness to the sustained interest in self-directed learning, and more specifically in the interest in ways of supporting the development of the necessary skills. (See also the proceedings of a recent conference on this topic held in Melbourne; Reinders *et al* 2004). Self-directed learning, although not synonymous with it, is closely linked to the concept of autonomy. It has been suggested that autonomy should be seen as a continuum rather than a dichotomy (Benson 2001) and it therefore seems reasonable to talk about degrees of autonomy to explain certain learning behaviour as in the following working definition applied in this chapter. 'Autonomous language learning is an act of learning whereby motivated learners consciously[1] make informed decisions about that learning.' (Reinders and Cotterall 2001:87).

In order for learners to become conscious of their learning and to make informed decisions, they require certain skills or at least the opportunity to develop them. These opportunities have been given to learners in different ways: by teachers in classrooms, through the teaching of independent learning skills and learner strategies, and most commonly through the provision of self-access facilities. As Benson and Voller (1997:15) point out 'Self-Access resource centres are *the most typical means* (emphasis added) by which institutions have attempted to implement notions of autonomy and independence over the last twenty years to the extent that 'self-access language learning' is now often used as a synonym for 'autonomous language learning.'

Some have equated self-access learning with self-instruction (learning without the help of a teacher) or self-directed learning (learning in which the learners have control over the learning process). However, although these various kinds of learning share some characteristics, they are not exactly the

same. Self-access language learning can be self-instructed or self-directed, but it is not necessarily so. Therefore, the following definition was proposed by Cotterall and Reinders (2000:25). 'Self-Access Language Learning is learning that takes place in a Self-Access Centre. A Self-Access Centre consists of a number of resources (in the form of materials, activities and help), usually in one place, that accommodates learners of different levels, styles, and with different goals and interests. It aims at fostering autonomous language learning.'

This definition identifies the fostering of autonomous learning as a crucial aspect of self-access. However, there is not necessarily a direct relationship between self-access and learner autonomy. Dickinson (1987) points out that learners need to have certain skills in order to benefit from self-access. Sheerin (1997) draws attention to the fact that SACs can be used for homework activities or for teacher-directed activities. And materials in SACs can be (and often are) of a restrictive nature (e.g. course books, but even materials designed for self-access; cf. Reinders and Lewis 2005, Reinders and Lewis 2006) and leave little room for the learners to make decisions about their learning (Gremmo and Riley 1995).

Computer-assisted language learning materials have been suggested to be able to support self-directed learning and potentially allow a certain degree of freedom (Dillemans *et al* 1998). However, although computer-assisted language learning materials exist that aim to encourage an autonomous learning style on the part of the learner (e.g. Allan 1997, Kaltenböck 2001) and others that help learners develop strategies for independent learning (**http://www.tess2000.com**), there did, at time of development of the ELE, not appear to be any recent computer programme giving access to language learning resources and taking a systematic approach to supporting students at all stages of their independent learning process. The challenge was to develop an environment that would provide support without taking away responsibility from the learners and that would not be directive, but rather suggestive and encouraging.

The Electronic Learning Environment

A decision was made to develop a programme suitable for use in the University's SAC. By no means was a computer programme or suite of programmes intended to entirely replace 'teacher' support and it would not be offered in lieu of an actual physical resource (the 'centre') where support

would be provided. The availability of human support and being a member of a learning community are, in our opinion, crucial to successful self-access language learning. In addition to offering a virtual introductory tour of the ELE, the SAC organises regular sessions for new students and qualified staff are available throughout the SAC's opening hours, seven days per week. There are advisory services on offer and workshops are available for students to attend.

The SAC has 18 workstations with 10 computers with flatpanel monitors located in the centre of the room in the form of an ellipse, allowing for easy interaction between the students, and a further eight computers with private booths. Separate rooms are used for the workshops and for language advisory sessions. Most of the time the students in the SAC are logged onto a computer for the duration of their study session.

Although there were financial, technical and practical (e.g. copyright) issues to be considered in developing the (electronic) support, this article focuses on the pedagogic issues. The two main goals were to provide students with easy access to a wide range of resources and to support them in their self-directed learning. As the SAC is used by different groups of students with different needs, backgrounds, levels, and interests, and as these groups change over time, it was necessary to create an environment that could function as a shell, containing resources that could be easily added to or changed. There would need to be a user-friendly interface to allow students to find and access these resources, preferably from within the environment. This was deemed especially important as previous research had identified ease of searching and locating resources as a crucial factor in self-access (Reinders 2000). Support tools such as dictionaries and a notepad were further additions to the programme.

Figure 1: The English Language Self-Access Centre (ELSAC)

A more challenging matter was how to assist students in their learning. For this it was decided to look at how to support students with different aspects of their self-directed learning such as identifying one's strengths and weaknesses, setting realistic goals, making a study plan, monitoring one's progress, revising one's goals and plans and finally to assess oneself.

Identifying weaknesses

In a directed environment, such a language course, an initial assessment in the form of a diagnostic test may be used to provide information about the students' weaknesses to the teacher and (often indirectly) to the student. In an unsupported, self-directed environment the learner has to initiate the process of identifying weaknesses and try to find out what areas of the language they have difficulty with (although materials can also play part of this role, cf. Reinders and Lewis 2006). In the self-directed and supported environment reported on here, the process is started by encouraging the learner to complete a Needs Analysis (see screenshot) using a provided framework. Learners are asked a number of questions about their learning and their current and goal levels for various language skills. This input is used by the computer to generate a list of priority skills by calculating the difference between goal and current level and by multiplying this by the level of importance the student has attached to the skill. Students are then encouraged to write a problem statement about their exact difficulties.

Figure 2: One of the screens of the Needs Analysis - rating current and goal levels

Setting goals and making plans

As part of the Needs Analysis, learners take three more steps. They:

1. Write solution statements to complement their problem statements

2. Set goal dates for all high-priority skills

3. Determine the number of hours per week to spend on each skill

Figure 3: The Record of Learning

Elsac
English Language Self-Access Centre

Record Of Learning

Date	Skill	Current Level	Goal Level	Resource : Resource Part	Helpful ?	Next Time ?
					There are many different kinds of exercises. I like this a lot!	and "L" sounds
6/Sep/2002	Pronunciation	6	8	Pronunciation Power 2 : Pronunciation Power 2 You need to insert the cdrom	This is a great computer programme to help me to practise my pronunciation. There are many different kinds of exercises. I like this a lot!	With this programme I will closely listen to my pronunication and practise "R" and "L" sounds
6/Sep/2002	Grammar	3	5	Cambridge International Dictionaries : Cambridge International Dictionary of Idioms	[edit]	[edit]
6/Sep/2002	Listening	4	7	Academic Listening Encounters. Listening, Note Taking and Discussion : Chapter 1 No.1	[edit]	[edit]
3/Sep/2002	Listening	4	7	English in Action. Famous Writers	[edit]	[edit]
3/Sep/2002	Listening	4	7	English in Action. Famous Writers	[edit]	[edit]
30/Aug/2002	IELTS	5	8	Insight into IELTS. The Cambridge IELTS Course : No. 7 Sample Test	[edit]	[edit]
30/Aug/2002	Pronunciation	6	8	Better English Pronunciation : No. 8. Page 76 to 81	[edit]	[edit]
30/Aug/2002	Listening	4	7	Authentic Listening and Discussion for Advanced Students : 37. Unit 9 5th		[edit]
30/Aug/2002	Listening	4	7	Learn to Listen Listen to Learn. Academic Listening and Note-Taking. : No 14 Unit 5 page 50	[edit]	[edit]
30/Aug/2002	Listening	4	7	Learn to Listen Listen to Learn. Academic Listening and Note-Taking. : No 15 Unit 5 page 54	[edit]	[edit]

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A Record of Learning (see screenshot) automatically records all materials the student has used and lists them with the student's current and goal level for the associated skills. It also lists the date the resource was used and any comments the student has made about the resource; when a student has finished using a resource (s)he is prompted to write down how the resource has helped with improving the associated skill(s) and what, if anything, the student thinks (s)he could do a next time to work on that skill or with that resource. This information is available to the student the next time (s)he studies in the Centre and the computer encourages the student to look at this before starting their work.

Identifying suitable resources and ways of learning

Once learners have a clearer idea of what skills to work on, it is essential that they can find and access appropriate resources easily. The ELE gives learners access to resources in a number of ways, the most important being the catalogue (see screenshot). Learners can search for resources by title, level (any level, lower-intermediate, intermediate, upper-intermediate, advanced, suitable for all levels (we don't have beginner students and therefore this level is excluded here), by skill and also by subskill. For example, learners can search for intermediate to upper-intermediate resources that help with writing an expository essay or writing paragraphs. All our resources have been coded at these levels, in the case of books sometimes even by individual pages.

Figure 4: Finding resources through the catalogue

Elsac
English Language Self-Access Centre

Help | Manage your Learning | Learn to Learn | Find Resources | Tools | Activities   Notepad | Log off

ELSAC   x

News

Search for Resources

Search Text: Language Skills: (click blue link to expand list)
[_____]   □ Listening
Opening Hours   □ Reading
                                                  ☑ Writing
                                                  □   Building an essay
Difficulty Level: □   Writing sentences
□ All Resources (any level)   □   Writing paragraphs
□ Lower-Intermediate   □   Expository (discussion) essays
Monday - Sunday   ☑ Intermediate   □   Argument essays
                  ☑ Upper-Intermediate   □   Summaries and paraphrases
                  □ Advanced   □   References
                  □ Resources suitable for all skill levels   □   Letters
Activities   □ Vocabulary, Spelling
                                                  □ Grammar
every Saturday f   **Other Category:**   □ Pronunciation
                   □ About New Zealand and / or Australia (accents)   □ Academic English
on application : I □ Computer Program   □ Activities
improve your lear   □ IELTS
on application : I   □ Study Skills
                                                  □ Reference Materials
every Tuesday fr

every Tuesday 1

every Monday (e   [_____] [_____]   [_____]

Every Tuesday from 14:00-14:30 : introductory session: how to learn in the ELSAC

Every Friday from 15:40 : the Chatroom : conversation and discussion skills

In addition, once a student has found a suitable resource, (s)he can read an extensive description and practical advice on how to use the resource, see what skills and subskills the resource helps with, what level it is and find links to related resources. Students are given direct access to all of the resource's parts, for example a book and its audiotapes as mp3 files, computer programmes, satellite TV etc. Several other pages give quick access to tools such as dictionaries, wordprocessors and encyclopaedias. Students also have access to extensive information on how to learn effectively. The ELE contains easily accessible texts and examples on effective learning strategies. References to these materials are made from within the catalogue. For example, if a resource helps with listening there are links to information on listening strategies, dealing with unfamiliar words etc.

Monitoring progress

An important aim of the ELE was to encourage critical reflection on the learning process. This is done by making individual suggestions on the basis of students' Needs Analyses and subsequent usage of the ELE. For example, students' priority skills as identified through the Needs Analysis and their subsequent use of the materials are matched. If a student does not work

according to his/her list of priorities then the mismatch is fed back to him/her through a prompt that might say something like

> *'Dear Student X, your top priority skill is Listening but you have not used many resources that help you to improve this skill. You have used many resources that help to improve Grammar but this is not one of your top priority skills. Please look at your Needs Analysis and think about what skills to work on and what materials to use.'*

Similar prompts are generated when learners' current levels do not approach their goal levels quickly enough to reach the target level by the goal date set by the learner. A prompt might appear that reads something like

> *'Dear Student Y, your current level for Listening is 6. Your goal level is 8. Your goal date to reach this level is only 4 weeks from now. You may not reach your goal level on time. Perhaps you need to spend more time on this skill.'*

Other prompts encourage students to update their Needs Analysis, review their Record of Learning, spend more time on individual skills etc. These prompts draw on a bank of possible texts and are generated by looking up and inserting certain variables such as the student's name, the skills they are working on, and others. It is important to note that all the prompts *suggest* rather than *direct*, leaving the final choice with the learner. The aim was to point out that language learning is a process that needs attention and maintenance and encourage the learners to take responsibility for this.

Revising plans

Learners are prompted to revise their Needs Analysis regularly and to update their plans. The identification of mismatches, as described above, is intended to encourage learners to revise their plans. If students do not revise their learning plan, the computer prompts them to do so.

Assessment

No formal assessment is offered as part of the ELE, although individual materials made available through it offer various kinds of assessment (for example books or programmes that contain an assessment procedure). Instead, learners are encouraged, and given the opportunity (to learn) to self-assess and to make use of peer-feedback. Samples of existing language tests are made available for those learners who wish to make use of them.

Research questions and methods

After the ELE had been in place for several months it was decided to investigate how it was used. The specific questions addressed were:

- How do learners perceive the support available to them in the SAC?
- How frequently do students make use of the SAC?
- Which features of the ELE designed to assist them in their independent learning do students make use of?
- Does the ELE affect students' learning behaviour?

To answer the first research question we administered a questionnaire to a randomly selected group of 65 students in the SAC. To answer the subsequent questions we looked at 1200 students' self-access usage histories by querying the (SQL) database that stores everything from learners' time on the computer to their Needs Analyses and the changes they make to them, their Records of Learning and much more. To obtain more information about the last question we carried out observations over a period of three weeks of how learners find resources, and we conducted 88 short interviews with learners before and after their sessions in the SAC. During these short interviews we asked students questions about their study plans for that day, what skills they wanted to improve, how they were going to work on them, and afterwards, how it went, and how they knew if they had made progress.

Findings

What do learners think about the Self-Access Centre and the ELE?

Students' impressions of the SAC are very positive with 92% saying they feel the SAC provides a good (19%) or very good (73%) service. 96% think learning in a SAC is either useful (33%) or very useful (63%). We also asked learners how they felt about using a computer for their learning. Perhaps surprisingly none of the learners said they had great difficulty using the computer in the SAC and only 8% of the learners said they had *some* difficulty. The majority felt the computer helped them with their learning.

How much do students make use of the SAC?

Students use the SAC very frequently and for long periods of time. Account activity (the period during which a student's account is active and being

used by the student) is on average just under 4 months. During this time students log on to the ELE 34 times on average, more than twice a week. The number of their actual visits to the SAC is likely to be somewhat higher, as visits where students don't log on to the computers (such as when they participate in a language learning activity or an advisory session), do not get recorded. The average session length is just under two hours. This seems quite long, considering the fact that students come to the SAC voluntarily and spend this time over and above other study requirements.

Which features of the ELE designed to assist them in their independent learning do students make use of?

The database that stores learners' learning histories shows that of the 1200 students investigated only 440 started a Needs Analysis and only 223 of those completed one - under 19%. Learners who do complete the Needs Analysis make two changes to them on average during the period they study in the SAC.

As described above, students are given the opportunity to formulate problem and solution statements for the skills identified as having a high priority, but very few do this. Of the students who complete a Needs Analysis, only 22% choose to do so. Very few learners (about 14%) make use of the feature which lets them set a goal date. This is somewhat surprising as many of them are enrolled in courses with strict deadlines. A similarly low percentage of students specifies a number of hours to work on a skill per week.

In half of the cases where learners do set a goal level their targets are unrealistic. Our goal levels range from 4-9 and were chosen because they correspond to the IELTS levels that many of our learners are familiar with (levels 1-3 were excluded because we assume all our students to at least have reached basic proficiency in English). Elder and O'Loughlin (2002) found that in a three month intensive English course students gained 0.5 level on average, with the lower proficiency students gaining more than the higher proficiency students. Many learners set goals of three or more levels higher within three to four months despite the fact that information about setting realistic goals is provided.

To answer the question how students go about finding resources in the SAC, we observed randomly selected students (just over one hundred in total) working in the Centre over a period of three weeks and noted if they got a

resource from the shelf first, asked staff, or used the computer to find a resource and if so which search options they used. The observations revealed that learners only make use of the computer and its various search options around 23% of the time. Around half of the time they find resources by going through them on the shelves, looking at the books, cdrom covers, DVDs, etc. Unfortunately, many of the resources are in digital format only and the students do thus not always find them. The rest of the time they ask staff. When students do make use of the computer to find resources they mostly search by title, indicating that they already know the resource they want to use. Only 14% of the time do students make use of the subskill search option (which is, arguably, a very powerful one, allowing the student to set very specific search parameters).

The Record of Learning gets used 3.5 times on average during a student's study in the SAC, so less than once per month. Very few students write down their thoughts about the resources they have used or ideas for their next session. Interestingly, when responding to a question about this topic as part of the questionnaire, 64% of the respondents said they used the Record of Learning 'often' or 'very often', indicating that depending on their definition of "often", the purpose of the Record of Learning was perhaps not clear to them.

From the short interviews we conducted, we found that learners make little use of information given to them through self-study materials and language learning activities about peer-feedback and self-assessment. Learners feel that IELTS and TOEFL scores adequately indicate their progress. Learners in our Centre seek very few opportunities for assessment between these tests.

Does the ELE affect students' learning behaviour?

As mentioned above, not many students complete a Needs Analysis. This is somewhat surprising as the first time students log on to the ELE it defaults to the Needs Analysis and staff in the SAC strongly encourage students to complete it. Also, it takes only 10-20 minutes for the first session and several minutes for subsequent sessions to complete and a user-friendly, encouraging language is used. Although those who don't complete the Needs Analysis receive prompts from the computer encouraging them to do so, these do not have a significant effect. Many students receive large numbers of these and other prompts over the period they study in the SAC, without any apparent effect.

It is interesting that almost half of the learners who start a Needs Analysis, don't finish it. During interviews, learners often said that they felt they knew

what their weaknesses were. When asked to formulate these, however, they made very general statements such as 'I make many mistakes', or simply 'listening'.

The computer also prompts students who don't revise their Needs Analysis to do so. But also this does not lead to a significant increase in the number of revisions.

The 22% of the students who wrote down a problem and/or solution statement made comments of a very general nature, as these examples show. (The original question on the ELE's Needs Analysis was: 'What is your main difficulty with this skill?')

> *None!*
>
> *I do not know!*
>
> *Not very perfect with my grammar*
>
> *Know nothing at all…*
>
> *I make a mistake*

Not all entries are like this. Some learners make very insightful comments, such as

> *I have difficulty learning new words, because I don't know enough words*

but the majority are similar to the examples above. The short interviews conducted with students right before and after their sessions in the SAC confirm this impression. When asked what they will work on that day, learners say things like 'I will read for one hour'. When asked why, i.e. what skill they hope to improve, learners do not seem to be aware of the relationship between certain activities, or resources, and the development of specific language skills. In summary, The features of the ELE designed to encourage students to reflect on their learning and the information given to them on how to do that, do not seem to lead to the development of a strong awareness on the part of the students.

Students use very few distinct resources during their study in the SAC; only five on average over an average of almost four months. Most keep using two or three books they find useful when they first come to the Centre. The number and range of resources students use seem unaffected by the catalogue, the highlighting of materials (e.g. the 'resource of the week'), staff advice and suggestions throughout the ELE about new or relevant materials.

Finally, prompts from the computer about the time students spend on individual skills or the nearing of a deadline to reach a certain goal level are largely ignored. Very few students increased the amount of time allocated to certain skills or the total amount of self-access time after receiving such prompts.

Discussion

At first sight, these results seem disappointing. It appears that students don't like to think about their learning, even when encouraged frequently and in many different ways to do so. According to information from the database, students very seldom used resources designed to improve their learning. Students (understandably!) mainly use resources that help them reach short-term instrumental goals like passing the IELTS exam and it is hard to encourage students to look beyond that short-term goal. Also, the range of resources learners use is very limited and learners often keep using resources they found during their first few visits to the SAC. Learners make very little use of search strategies to identify useful resources but prefer to go through resources on the shelves. Learners show very little awareness of themselves as learners, as was clear from their comments in the Record of Learning and the Needs Analysis, and also from the interviews we conducted with them.

Why would this be so? One of the reasons may be that the student population turned out to be of a much lower academic and English level than we had anticipated. Due to a number of unforeseen reasons we had to cater for large numbers of students who were enrolled in pre-university language courses, rather than for mainstream university students. Many of these are young Asian students who have no experience in studying at university, or in a Western educational environment. Few have experience with independent learning. Our guess is that the results would have been different with more (academically and linguistically) advanced students. It is also possible that certain characteristics of the ELE did not work as we had hoped. The constant reminders and prompts may have put students off, and as these did not include specific recommendations but rather were of an encouragining nature, students may not have known how to respond to them. Perhaps students who show some difficulty in their self-directed learning should receive more specific information.

On a positive note, the students themselves *did* find the SAC a good resource and rated it very highly as reported above. Students found it a

comfortable, friendly and supportive environment. This may be one of the reasons why they used it so frequently and for so long. What would these students have done if they would not have come to the SAC? In a previous research project (Reinders 2000), the author asked this question to 126 language learners enrolled in a very similar language course, in another city in New Zealand. About 40% of the students reported to use English only 'sometimes' outside the University. Most of the students stayed in homestays with families who have the same first language. Few have regular contact with native speakers. Their time in the SAC is one of the few occasions on which they interact in and engage with the English language outside the classroom. The fact that the SAC provides them with access to a learning community may be its most significant function. Crabbe (1993) refers to this when he says the SAC provides a 'bridge' between the classroom and the outside world. It offers a safe transition zone where learners can prepare for what lies beyond.

Finally, research has emphasised the need for adequate training and support in using self-access facilities (Star 1994, Gardner and Miller 1997) and this seems to be confirmed by our own experience. The various types of support offered in the SAC, however, do not seem adequate in preparing learners for the independent learning process. At the time of writing this article a guided self-study programme was taking place in the SAC whereby university level students had a weekly meeting with a SAC language advisor. The sessions were designed to prepare learners for their self-study, recommend resources, give feedback and encourage reflection. They were set up in such a way that the amount of support students receive gradually diminishes. It appears that the students who participated in this programme were not only more aware but also better equipped to benefit from the features of the Electronic Learning Environment designed to further encourage them to reflect on and take control of their own learning process. Informal observations confirmed our expectation that these students make more and fuller use of the ELE. They seemed to be better able to benefit from the various types of support offered to them. Further research will confirm whether this impression is correct. One thing that seems clear is that, although the computer can support learners in their self-study, the initial training and encouragement are crucial in ensuring students are able to benefit from it.

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Footnotes

1. Although not all decisions pertaining to the learning process will be made consciously as even at a metacognitive level some automatised operations can probably take place (Hacker, Dunlosky and Graesser 1998), it appears that many operations are at least available to learners' conscious attention.)

2. Readers may wish to visit the Self-Access Centre's website where a demo of the Electronic Learning Environment can be viewed (**http://www.elsac.auckland.ac.nz**).