



## **INTRODUCING TECHNOLOGY INTO LANGUAGE EDUCATION: ESTABLISHMENT AND MANAGEMENT OF A SELF-ACCESS LEARNING SYSTEM**

*The progress of the human race in educational technology has paralleled that in civilisation. In the evolution of educational technology, a variety of devices composed the educational apparatus of different periods of civilisation. However plain they may be, they play a vital role in education, provided that the teachers maintain a high degree of sophistication in using them for classroom management. There are educational devices on the market today with attractive forms, easy operational principles, and various modern facilities. Yet, all of them may not be appropriate for all situations. Therefore, the identification of their potentials and limitations is important when making decisions on purchasing and installing them within a self-access language learning system. A self-access language learning system is not just a random collection of educational devices. It has to be carefully designed according to the needs of the institution concerned, and managed in such a way that the clients derive maximum benefit from it. Basically, it is meant to promote the philosophy of self-directed learning and learner autonomy that is currently in vogue in second language pedagogy. Establishment and management of such a system depend on the aims and objectives of the institution concerned, its target clientele, its budget for purchasing the needful, and the types of educational devices that have already been installed. Therefore, this paper presented at the International Conference sponsored by the Sri Lanka English Language Teachers Association - 2000 analyses the potentials and limitations of a variety of educational devices in the course of studying the feasibility of introducing them into a self-access language learning system in a resource-poor higher educational institution, and develops models for establishing and managing such a system to suit any situation in the world operating within a shoestring budget.*

### **Principles of Introducing Technology into Language Education**

By introducing technology into language education, it is possible to promote learner autonomy and self-directed learning. According to Dickinson (1996: 46-47), 'learner autonomy' means the independence that the learner enjoys in organising his/her approach to learning the language; and, according to Moulden (1985: 206), 'self-directed learning' means the understanding that the learner has the right to direct him/herself in the learning process. These remain two necessary principles that should be introduced into higher education institutions. They reduce learners' dependence on teachers, and teacher-centred styles of teaching, because learners enjoy a great amount of independence under these principles.

In principle, a self-access learning system is meant for a learner making an autonomous learning effort. The learner is supposed to come to the centre with a clear learning problem – grammatical, syntactical, lexical, phonological, ethnographical, or cognitive. Therefore, if the resources are duly accumulated, the learners can think of what to do with the technical support they have. They can plan their activities at the resource centre before coming in. In achieving precision in giving assistance, the instructor can use the resources with flexibility. S/he can identify the special areas where the learners need support and develop solutions to their problems.

The twentieth century language education setting has received several important devices such as the audio cassette player, the television set, the language laboratory, the film projector, the slide projector, the overhead projector, the computer with multimedia facilities, to mention a few. In addition, there are the simple non-electrical and non-electronic devices such as reference books and flashcards. While developing a case for identifying the use of technology in language education in terms of establishing a self-access learning system for a tertiary-level educational setting, firstly, it is important to assess some of these major devices used today.



## Language Laboratory Concept

In terms of introducing technology into language education, the language laboratory system evolved as an electronic medium. Its operational principle is as follows: The controlling desk is occupied by the instructor, while the workstations by the learners. The learners communicate with the instructor through an intercom facility. Audiocassettes with a recording of the relevant listening text and exercises are installed in the cassette players connected to the work stations. In the conventional drill exercises, the learners listen to the recording as many times as they wish, pick up the words, and then carry out the role-play dialogues with the characters in the tape. Finally, they answer the comprehension questions that follow. Under communicative approach, learners listen to various spoken texts and answer scanning and skimming questions or carry out exercises such as transferring information from texts into charts or diagrams and vice versa.

Following are a few limitations in the language laboratory system:

1. It operates always within a rigid framework that introduces only individualised learning.
2. Except the standard learning materials designed by an ELT publishing firm that have been purchased by the institution, it can hardly accommodate the instructor's choices.
3. The instructor cannot deviate from its operational principles.
4. Partitions between the workstations limit the opportunities for pair/group work.
5. Classroom interaction is hindered by the console.

Proponents of second language acquisition argue that in a classroom setting a language is better learnt through pupil-pupil and pupil-teacher interaction. They claim that learners acquire most of the language needed for daily communication from a variety of sources rather than from doing some rote learning in a formal setting. In that sense, the non-personal, non-communicative, and non-interactive atmosphere engendered by the language laboratory concept is not conducive for language acquisition. Based on his experiences at the US University of Ann Arbor, Souza (1985: x-xi) rightly discourages the importation of language laboratories into Sri Lanka. His rejection is valid even for today, as they help the learner in a very limited way. Evidence of the close-down of the language laboratory at the Peradeniya Govt. English Teacher's College supports the premise that in years to come they will remain white elephants in Sri Lankan educational settings.

## Multimedia Computers Playing a Leading Role in Education

A computer-based language centre is more versatile than a language laboratory. At a language laboratory, the only thing that a learner can do is listen to a spoken text and carry out the drills or written or oral communicative exercises. But, with a multimedia computer, a learner can do several activities – by means of compact discs s/he can watch video recordings, listen to audio texts, read various types of texts presented on the monitor with illustrations, and use the in-built encyclopaedias, dictionaries, lexicons, grammar checkers, and thesauri.

On the educational technology market there are multimedia language learning packages compatible with the present day computers. They have attractive and efficacious language learning materials that can effectively inspire the learning process.

Flexibility in the installation of a multimedia computer can even enhance pair/group work. The image on the computer monitor can be projected on a large screen by means of a multimedia projector so as to enable a large group to view it at the same time. This can promote even interactive learning in a significant way, as the learners can react to a learning material as a group.

Moreover, they can gather a wider exposure to the language through computer technology, because of its potential of keeping all their sensory organs active. Thus, multimedia computer presentations involving images, sounds, movements, texts, and speech help the learners to achieve an advanced



level in understanding and reflecting on a text, whereas a language laboratory presentation helps them in an elementary way.<sup>1</sup>

### **Low-cost Educational Devices to Start with**

On the one hand the purchase of the above incurs a considerably large amount of capital and their installation requires large-scale architectural planning and designing, and on the other hand there is a wide range of devices that help to form a self-access language learning system within a small budget with plain infrastructure arrangements.

A multimedia computer system is a luxury to many educational institutions because of the poor financial situation in Sri Lanka. Therefore, to be realistic, it is advisable to start a self-access learning system with some low-cost educational devices. According to Prayad Ruechakul (1996: 196-198), the Listening Corner and the Grammar Corner in the Self-Access Learning Centre established in Chiawanwithaya Secondary School in Thailand are equipped with audiocassette players, listening tapes, words of the listening texts presented on cardboard, graded grammar exercises and answer keys presented on sheets of paper only. But they greatly help the students.

A low-cost self-access learning system designed in this way should primarily have a set of reference books such as student encyclopaedias, lexicons, dictionaries, thesauri, catalogues and manuals, classified and graded story books, scrapbook collections of newspaper clips, reading cards and flashcards highlighting various lexical, grammatical, syntactical, and phonological concepts, language games, and pedagogical guides. These are essential in solving day-to-day language and pedagogical problems within the institution.

With the assistance of the instructors, learners can refer to these materials in finding quick solutions to their problems. Therefore, once the venue is decided, the first thing to do is to organise a reasonable number of shelves with reference books and other materials in the above category.

In addition to these print resources, there should be audio cassette players to help the learners to listen to learning materials presented in a variety of ways: dialogues, speeches, stories, songs, announcements, live broadcasts, and so on. All recordings should have their texts. The learners should be enabled to listen to the recordings with the texts in hand and improve their listening skills as and when they wish.

The function carried out by audiocassette players is done in an enhanced fashion by the video deck and television screen. A video carries a text in both sound and image. Moreover, the learners can interact with listening texts, while using a video deck, which, like a multimedia computer does, presents materials, appealing to all sensory organs.

### **Problems of Installing Self-Access Resources**

It is common for an institution to face severe installation problems, when establishing a self-access learning system. As this incurs a great deal of financial, material, and intellectual input, one has to consider many pedagogical, managerial, and practical aspects of the project.

Owing to the fact that the concepts of 'learner autonomy' and 'self-directed learning' are new to the formal educational system of a country like Sri Lanka, most institutions face new problems with regard to allocation and management of space. It is unthinkable for many institutions to have purpose-built accommodation for a self-access learning system. What most institutions do

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<sup>1</sup> Today a standard Pentium 4 multimedia computer (with modem, compact disc player, speakers, etc.) costs about one hundred thousand Sri Lanka rupees and a computer laboratory with 30 computers costs about three million. In order to build up a lingua-phone language laboratory with 30 workstations it may cost nearly the same. Therefore, the finances to be incurred on a language laboratory whose function is limited to listening and drill can be effectively invested on an obviously versatile multimedia computer centre with an adequate number of computers.



is convert a room built already for some other purpose. Therefore, by looking at some already-developed models in other countries it is possible to get an idea with regard to the design of such a system for any resource-poor educational setting.

It should go without saying everything should be done to make a resource centre of any kind welcoming, light, airy and colourful, but in fact there is a long tradition of language laboratories being buried in basements and learners in separate booths facing blank walls while they work. Ironically, cramped and irregular spaces often impose user-friendly solutions, since they make it impossible to install blocks of equipment or long, straight lines of workstations. The development of "islands" of equipment for installation in both large, open areas and in nooks and crannies is in part due to a recognition of this. (Riley 1997: 109)

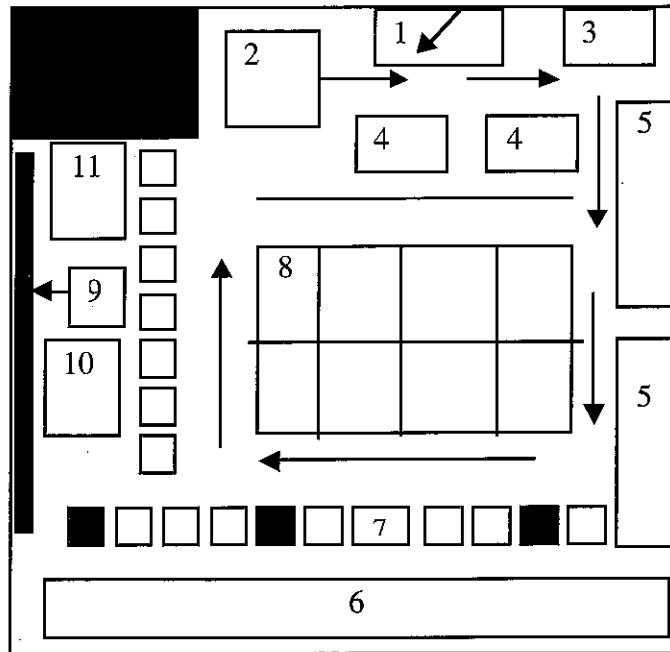
Further, Philip Riley (1997: 118-121) illustrates the application of his suggestions by means of the ground maps of the self-access resource centres at the Chinese University of Hong Kong, Hong Kong University, Sonovideotheque Multilangue – CRAPEL (Centre de recherches et d'applications Pédagogiques en Langues), Université Nancy 2, and Lingnan College, Hong Kong. Each of them displays a different style of space division. They all have recognised the management and safety, consultation and self-direction, customer service and resource maintenance, and the expansion and innovation aspects of a self-access resource centre. A careful study of these models can prevent most of the shortcomings at the planning stage.

### **An Installation Model for a Resource-Poor Setting**

Any developing country cannot easily adopt expensive educational facilities introduced in other countries. Even when an institute does, it cannot purchase them in large numbers. For example, hardly an institute can organise a self-access language learning system with dozens of multimedia computers. When it comes to making budgetary decisions, the very first thing to take note of is the degree of relevance of the particular educational device to the clientele. Every mistake made at this stage leads to heavy constraints. As the financial condition is often bleak, these constraints may hinder the general progress of the institution. However, it is necessary to install all types of facilities, at least in small numbers.

While embarking on such a project, a resource-poor institution has to take precautions in several aspects. Learners have different learning styles. Their attitudes to videos, audiocassettes, reference books, and discussions with the teachers may differ from each other. Therefore, in order to use the financial allocations efficiently, it is important to align the requirements in a hierarchy of needs.

However, the complete establishment of a self-access language learning system cannot be decided right at the start. First, a collection of facilities representing all categories mentioned above can be introduced in small numbers, e.g., one or two computers, four or five cassette players, and a television set with a video deck. At the same time steps can be taken to introduce print materials. In 1999, in response to a suggestion made by the then Commandant Brigadier Gamini Hettiarachchi, the following installation model was developed for the Kotelawala Defence Academy self-access learning system based on the conditions already present there.



- Size of Room 985 cm x 780 cm
1. Entrance
  2. Instructor I
  3. Electrical Equipment Shelf
  4. Group Tables
  5. Book, Audiocassette & Video Shelves
  6. Windows
  7. Individual Work- stations
  8. Multi-Purpose Table
  9. Blackboard
  10. Instructor II
  11. Demonstration Table

The room allocated for this project is 9.85 m. x 7.8 m. less a 2.4 m. x 2.6 m. section. What has been done here is re-arrange the already available furniture to suit the requirements of a self-access language learning centre.

Controlling Instructor No 1's desk is at the entrance, as he has to check the clients while entering and leaving.

Controlling Instructor No 2's desk is just in front of the blackboard to the left, as he has to use it whenever he needs to explain something to a client.

The shelves for electrical equipment, books and other materials stand against the wall to the right, as that arrangement does not hinder the movements of the clients.

The video deck is installed on the demonstration table near the blackboard as everybody can watch it comfortably.

The multipurpose table (370 cm x 120 cm) with 10 chairs is at the centre as it accommodates all types of self-directed and autonomous learning activities.

In addition, twelve individual workstations are organised along the windows for the independent learners. Space for three computers is allocated within the same range, as the use of computers does not often involve group work.

The remaining space is used for three tables in front of the blackboard to accommodate six learners and two small tables near to Instructor 1's table to room language games or group work.

The area allocated for each work station matches the international standard area (1.7 m sq. X number of hours open per week) shown by Riley (1997: 108).

All these details were given sufficient consideration while designing the system, but as well as the establishment, the management of a self-access learning system is too an important area to develop.

### A Management Model

For managing this self-access learning system the following strategies have been adopted:

1. Two instructors should be present on full-time basis when the centre is open.
2. They should be qualified in language pedagogy as well as information technology.



3. They should be trained to cover the pedagogical, instructional, organisational, maintenance, and management requirements of the centre.
4. They should be given a special training in public relations.
5. A card system should be introduced to the users, allotting them an access time frame.
6. A set of maintenance conditions should be introduced for the users to follow.
7. Power should be vested on the instructors to take disciplinary actions against the misusers.
8. The centre should be open to the clientele from 9.00 a.m. till 4.00 p.m.

Installation of the relevant resources alone is not sufficient. They should be introduced to the learners. That is why the instructors require a variety of pedagogical and technical skills. They have multifaceted roles to play. They have to fulfil their professional and moral requirement of being philanthropic towards the learners. Their success depends on their commitment to cater for individual learning styles. This is revealed in the guide presented by Sue Fitzgerald et al (1996: 55-69) to the sophisticated use of a multimedia computer programme, an index system, and a briefing by a tutor in directing learners in their search for solutions to language problems.

A self-access learning system is meant to help a learner only in the areas where it is necessary, and it is the teacher's responsibility to promote the learner's initiative in searching for assistance. This can be achieved only through collaborative learning as Bosworth (1990: 25-31) argues. Therefore, the management of a self-access learning system requires more practical and theoretical investigation.

### Conclusion

Introducing technology into the language education system of an academic institution always involves great amounts of financial, material, technical and intellectual input. Such an effort should be made with a careful study of the pros and cons of purchasing and installing the relevant infrastructure facilities and introducing the strategies and policies for their use and maintenance. In this study I have analysed the limitations of a language laboratory and the potentials of a multimedia computer system. I have also introduced the use and relevance of low-cost educational devices such as printed materials, videos, and audiocassettes and stressed that the institution needs to streamline the use and management of the available resources first, before embarking on new projects. However, a plan has been included here to meet the proposal for a lightly computerised self-access language learning system. The presence of an infrastructure alone does not fulfil the learner requirements. There should be instructors qualified in language pedagogy, public relations, and educational technology to assist the clients. Without proper personnel a resource centre will rather turn into a museum. Therefore, both establishment and management aspects of this kind of project should be treated with equal weighting.

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