



CHAPTER 6

STUDENT SUPPORT IN OPEN AND DISTANCE LEARNING FOR TVET

Ved Goel

INTRODUCTION

In the delivery of technical vocational education and training (TVET) through distance education, student support plays the pivotal role. Whether provided to an individual student or group of students, student support is necessary and complementary to the print material supplied. Student support includes all those activities (administrative or academic) which help students progress through the course.

Many distance education practitioners have written extensively on the scope of student support in open and distance learning (ODL) (Reid, 1998; Rumble, 2000; Simpson, 2000; Tait, 2000; Wright, 1989). They have all emphasised that student support services are integral to the overall working of ODL. And although the objectives of a student support system in distance education cannot be defined as a requirement to guarantee success for all students, it is well documented that when it comes to articulating what we mean by student services, distance educators are way ahead of their colleagues in conventional universities.

AREAS OF STUDENT SUPPORT

Student support in TVET through distance education can be broadly categorised into two areas. The first is the administrative (or non-academic) support and includes activities or services which support students in making enquiries, admissions, pre-study advisory services, record-keeping, information management, non-academic aspects of assessment, library services and other administrative aspects. The second is the academic support, which consists of defining the course, explaining concepts, exploring the course, providing feedback (both formal and informal), providing hands-on practical experiences, developing learning skills, following up students' progress through the course, extending the boundaries of the course and sharing the excitement of learning (Simpson, 2000).

There are a number of approaches followed to provide academic support to students. These include the following:

- Establishing study centres, which are used for tutoring an individual student or a group of students
- Conducting counselling sessions
- Self-study help (peer group)
- Mentoring
- Telephone contact and e-mail
- Television and radio broadcasts
- Specially designed audio-videotapes and computer-mediated communication

For hands-on practical work, students are supported either at work (industry based) or at an institution providing necessary infrastructure (institution based). Student support services have to be equitable, gender sensitive and flexible to meet the special needs of learners. The main objective of student support is to support individual learning. It is based on the delivery requirements of clients, not the interests of trainers or providers. Leach (2000) has identified the following key characteristics of student support in vocational and professional areas:

- Support should provide a model learning environment.
- Support should build on an existing framework as far as possible and be consonant with the culture in which it is developed.
- Support should be developmental and exploratory, providing experience of a wide variety of teaching and learning opportunities.
- Support should recognise and build on the variety of professional experiences and its participants.
- Support should acknowledge both the private and professional aspects of the learners' experiences and their interconnectedness in the development of learning.
- Support should be rooted in the practical skills development in a real work situation.

STUDY CENTRES

Study centres are the backbone of ODL and make it different from correspondence education. A study centre, which provides quality reception and quality tuition to its students, is highly motivating and encourages students to learn. Mills (2000) has described the following support facilities available at study centres:

- A place for individual study in appropriate surroundings and at appropriate times
- Library facilities
- Laboratory and hands-on practical work facilities
- An opportunity for students to meet the distance education institution's administrative staff
- An opportunity to meet fellow students in the same and/or different course
- A focus for students' association activities
- A source of information and guidance to the general public in a local area
- Access to technology

- Access to local guidance and counselling, individual and group tuition, group viewing and listening
- Facilities for taking test and examinations

There can be a great variety in study centres within the same university and also across different open universities worldwide. Here are just a few examples:

- In some open and distance institutions such as Indira Gandhi National Open University of India (IGNOU) about 630 study centres are funded by the institution itself and managed by its full- and part-time staff. Many of these study centres are, however, located in the buildings of other formal colleges. These study centres provide all the functions described above and have a corporate image with which the students can easily identify.
- The other extreme is the model of study centres of Open University in the UK (UKOU). There, study centres are suites of rooms in another institution's building (normally a college of further education), which are rented during evenings or on Saturdays. Students normally attend for face-to-face tuition.
- In Germany and Spain, the communities provide and pay for study centres. These centres are located in community halls, public buildings, town halls and commercial buildings.
- The South African Institute for Distance Education promotes the concept of community learning centres: local community centres sharing their space (and the cost of infrastructure) with a distance education institution. This arrangement allows the distance education institution to get involved in the local community. These study centres are playing a critical role of organising socially significant programmes.
- The Open University of Hong Kong (OUHK) provides facilities for a library, an electronic library, a computer laboratory, a science laboratory, an audiovisual centre, a language laboratory, and places for disabled students. It also provides six self-study centres, study centres, surgeries, television broadcasting workshops, day schools, computers and science labs for hands-on experiments. The Lee Hyson Foundation donated science laboratories and the environmental laboratory, providing hundreds of students at one time with a place to conduct experiments and write examinations. So, unlike the UKOU where students largely conduct experiments independently with the help of home kits, at the OUHK such kits are used at study centres under guided supervision of the tutors.
- The Open University of Israel has the provision of headquarters and about 110 study centres all over the country. Such centres, along with libraries and laboratories, are housed in the conventional education institutions.
- At the Central Radio and Television University (CRTVU) in China, teaching-learning practice is largely through radio and television broadcasts. The university follows a network of provincial radio and television universities (PRTVUs) (governed by the provincial education commissions), branch schools (governed by the civic education bureaus) and TV classes (conducted at workplaces). The network comprises 43 PRTVUs, 666 branch schools, 1100 work stations and over 30,000 TV classes. The core radio and video classes (along with adjunct printed materials) are distributed by the CRTVU, while the PRTVUs are free to develop their own radio and television programmes to meet the provincial education and training needs and to conduct provincial examinations. The branch schools monitor and co-ordinate the teaching-learning activities relating to radio and TV

programmes, tutorials, field study, lab work, tests and examinations. They also govern work stations and TV classes. It is the work stations which admit students, distribute materials and conduct tutorials. The TV classes are places to view programmes, conduct hands-on experiments and field studies, and maintain contacts with enterprises/work units to which the students are attached. The CRTVU system is an excellent example of centralised decentralisation and a coherent system of mass distance education and training.

Student support in training doctors in child health care in India

A variation on the study centre model is the delivery of a programme to upgrade the skills of doctors in rural communities in India through a network of programme study centres (PSCs), skill development centres (SDCs) and the workplace. The multimedia teaching-learning package includes print materials, practical manuals, assignments, log books, counselling, hands-on training, video and teleconferencing. While the materials and teleconferencing are delivered by the IGNOU headquarters, counselling and experiments take place at medical colleges (PSCs) under the supervision of a medical professor. Repeat practice on a number of patients takes place at the district hospitals (SDCs) under the supervision of a hospital doctor,

and the skills in areas of preventive and social medicine, paediatrics, and obstetrics and gynaecology are further practised at the primary health centre (i.e., the workplace). Since health is a state subject in India, the Regional Health Science Advisory Committee and the regional consultant in each state were important instruments of programme implementation and monitoring. Twenty-three PSCs in 18 states with 140 SDCs are involved in implementing the programme, and each doctor-counsellor at the PSC and SDC is responsible for providing counselling and mentoring support to four to six student doctors who maintain log books for cross-centre monitoring and for purposes of evaluation (Panda and Jena, 2001).

TUTORING

Tutoring brings ODL closer to face-to-face teaching of conventional universities. But skills of tutoring required in distance learning are much more complex and sophisticated than those required in conventional universities. Distance learning promotes independent learning and active participation of the learner: the two fundamental pillars of education. According to Simpson (2000), a distance tutor has to perform a combination of the following functions:

- *Defining the scope of the course.* In distance learning, the course materials provided to students define the syllabus. It is, therefore, tutors who define the scope of the course.

- *Explaining the course.* A tutor explains the course through individual tutoring or small group discussions or whole class teaching. The tutor has to be aware of different resources such as audio, videotapes, CD-ROM and other media support available for a particular course that could provide a variety of expositions for understanding the content. Unlike a conventional tutor who provides elucidation of the course, the distance tutor is mindful that elucidation is the responsibility of the course materials and the tutor's responsibility is to facilitate learning. A distant tutor provides alternative explanations when the student seeks assistance on course materials that he or she finds particularly difficult.
- *Developing study skills.* Having strong study skills enables a distant learner to take full advantage of printed and other resources available. The course materials themselves, which are perceived difficult by many students, can't help the students develop study skills necessary to use the materials to their best advantage. Therefore the responsibility of helping students develop those skills falls on the shoulders of the tutors.
- *Assessing students.* In distance education, generally the course material includes a number of self-assessment questions. There are, however, some doubts about their effective use by students. A tutor can informally ask questions to assess students, discuss the answer and frame a supplementary question. Tutors also carry out formal assessment through assignments, which are marked either manually or by computer. Assignments provide an opportunity for invaluable feedback to students. For many students this feedback is the most substantial teaching contact with their tutor.
- *Monitoring progress.* A tutor keeps a record of all assignments submitted by students and takes proactive action if someone seems to be failing in meeting targets.
- *Organising and supervising hands-on practical work.* This function is of special importance in TVET. It is the activity that focuses on the critical skill development. The practical dimension in TVET has led to the development of the concept of partnership between educational institution, industry and community. ODL institutions follow a variety of approaches in providing student support in hands-on practical work. It might be industry-based, where the immediate supervisor of the student or a designated staff person performs the function of tutor for that part of the course. In other cases, the institution offering the course provides facilities for practical work at study centres and/or at its headquarters. The study centre may be specifically set up and managed by the distance learning institution or another conventional institution. At the study centre the faculty members responsible for the course then perform the tutoring role.

TECHNOLOGY AND STUDENT SUPPORT

Research studies have indicated that student support sustains motivation of students to learn and continue the course and not drop out.

In reviewing technologies that are available for student support in open and distance education, it is tempting to focus on the new and latest developments in information and communications technology (ICT). The experience of open universities in both the developing and developed world suggest that students are best served when a combination of old and new technologies are employed.

Training laboratory technicians through distance

The Kenya Polytechnic Nairobi offers a certificate course through distance for the training of science laboratory technicians. The students are mostly laboratory assistants working in secondary schools. The course has a strong hands-on practical work component and students have to perform a number of experiments in physics, chemistry, biology and laboratory safety. The focus of the practical work is on development of skills that will enable laboratory technicians to handle equipment accurately, carry out regular maintenance and make simple repairs. Practical work also focuses on preparing reagents, biological

specimens and safe disposal of laboratory waste. Skills associated with providing a safe working laboratory environment is also included in the practical work. Since the number of students admitted to the course is limited, the students come to the Kenya Polytechnic Nairobi to perform experiments under the guidance and supervision of faculty members. To ensure that students don't have to come again to Nairobi from far-off places, they are also assessed on their practical skills at the end of the practical work. While students are in the Polytechnic performing practical work, they get face-to-face tuition also on course materials.

In discussing the role of technology in student support it is, however, important to recognise that the choices are made in part by what is readily available, what is best for the task at hand, what students can easily use and what is affordable by both the institution and the students. Bates (1995) has proposed an ACTIONS model for the selection of media and technology for teaching, which is also applicable in the selection of technology for student support. (The acronym ACTIONS stands for access, costs, teaching/learning, interactivity and user-friendliness, organisational issues, novelty and speed.)

Audio-based technologies

- *Radio* has long been one of the most important forms of audio technology by many higher education institutions such as University of Nairobi, National Correspondence Institute Tanzania and University of Zambia to support their correspondence courses. Many of the ODL institutions such as Central Radio and Television University of China, Sukhothai Thammathirat Open University of Thailand, Indira Gandhi National Open University in India (IGNOU) and Open University of UK (UKOU) have used radio for student support. The radio programmes either take up crucial concepts from those covered in the print and clarify them, or they provide an alternative perspective in which to view a concept which is already covered in the printed course material. Radio programmes are not interactive, and they cover only the theoretical part of the course. They do not help in developing hands-on practical skills.

The importance of sustaining motivation

Nursing students in an ODL course who had support from fellow students and university personnel were the ones most likely to succeed. Two important issues underpinned this factor: the acknowledgement of the needs of adult learners and the recognition and fulfilment of the students' own needs. It was important to the students that they had a choice in whether to attend tutorials and participate in debates and discussions. A close network had emerged in the tutorial groups with telephone support and group meetings arranged and facilitated by the students. This added to the students' well-being enabling

them to feel supported and valued as individuals. It also combated the potential isolation of open learning, something the students were well aware of: "I think if I was on my own it would have been difficult. I would have given up sooner." The importance of the tutor and their facilitation role was discussed in various forms and the effect that relationship had on motivation did not go unnoticed by the students themselves. One student felt surprised that the tutor was interested in what he as a student might be able to contribute (Scott, Burns and Cooney, 1998).

- *Audio cassettes* have been used by almost all institutions providing some form of distance education. Audio cassettes are much more flexible than radio programmes since they can be listened to by students at their convenience. Moreover a student can listen to part or all of a programme on a cassette as many times as he or she wishes. In some countries, audio cassettes are supplementing radio programmes. At the UKOU, the number of hours of radio broadcasts has decreased over the years, but the supply of audio cassettes has increased in the same period. Like radio programmes, audio cassettes also have their limitation in TVET programmes.
- *Telephone* has been used occasionally to offer student support, but telephone support tends to be individualistic and expensive since calls are very expensive in many countries. Telephone support could occur among peers or between student and tutor. One of the advantages of support through telephone is its immediacy. The disadvantage is lack of visual contact and absence of body language. Student support through telephone has the limitation of being restricted to only cognitive aspects of the course, though it has been found to be as effective as face-to-face student support.
- *Teleconferencing*, also known as audio-conferencing, is popular in countries such as Australia, Canada and India where distances between tutor and student can be great. In this mode, the tutor sets the agenda of the conference and at the other end, which is generally a study centre, a number of students sit across a table with a loudspeaker attached to the telephone. For a conference call to be successful, it has to be structured with the tutor seeking comments from each student by name, rather than from the whole group.

Teleconferencing has been used by the University of the West Indies satellite project, UWIDIET in programmes of continuing education. The University of the South Pacific has also used audio links of this kind to support students in island states. In New Zealand, Otago University has used radio to link a number of regional centres for audio conferencing in its programmes of continuing professional development. And in Canada, Memorial University has done a pioneering job by using such technology for medicine and continuing education.

- *Voice conferencing* is the combination of a telephone and computer to provide a complex voice mail service. By making a telephone call to a number set up by the course provider, students can select from a menu of services provided, which can be available even on weekends and holidays. This service has been successfully used in Australia and is on trial at UKOU. One study conducted on students taking law subjects in Australia reported this:

Computer-based voice conferencing system is a potent and cost-effective means of minimising isolation, distance from other students and perceived disadvantages compared to internal students studying same subjects. These bulletins are seen as having a variety of possible uses including covering developments in dynamic disciplines after the cut-off time, extending the “shelf-life” of print-based materials, providing students with particular needs with a valued form of contact and being either a regular feature of subjects or used at peak times. They provide a means for spontaneity and for students to share setting the agenda — features perhaps not often associated with teaching in the distance mode (Carmichael, 1995).

Video-based technologies

- *Television* has been widely used by many distance education institutions to support students, particularly in developed countries. Like radio, it reaches a fairly large number of students’ homes. Moreover, unlike radio, television programmes permit the richness of full symbolic representation. Developing countries have not been able to use television as much because production costs tend to be higher and broadcasting authorities tend to be reluctant to use air time for small audiences.
- *Video cassettes* are a powerful resource for providing student support in ODL. They do use television, but not the air time. Like audio cassettes, they can be used by students at their convenience, either at home or at the study centres individually or in groups. In TVET programmes, video cassettes play a significant role because they can be used to demonstrate equipment, tools and/or the processes to be used in the tasks being learned. The University of Victoria in Canada used video to support students taking a certificate course in computer-based information systems.

Computer-based technologies

In many countries, computers are being used in a variety of ways to provide student support.

- *Computer conferencing* is generally orchestrated by the tutor and involves posting a directional message, like a message on a notice board, which can be accessed by students at their convenience by logging on to a computer either at home or at a study centre. Students can then contribute to the discussion by posting their own messages. They can respond to each other’s contributions and the tutor can

intervene at any time. In computer conferences the tutor normally takes the role of stimulator and boundary setter. The tutor summarises the discussion at regular intervals and posts more questions for discussion. Studies have indicated that the use of computer conferences is not dependent on prior use of computers and that conferences appeal to inexperienced users. However it is common for students to “drop out” of computer conferences, so they do need to be supported in the early stages. Learning through computer conference is a self-directed, self-managed and self-motivated process. The students who benefit most from such a system are those who have perseverance and use the conference for interaction and seeking information.

- *E-mail* communication has also become very common. Students use either their own computers or those at a study centres or an Internet café to send e-mail messages to peers or tutors to seek clarification on any topic of the course.

Virtual campuses

A particular development in programme delivery and student support in the last few years has been the establishment of the virtual university or campus, which provides for all transactions in teaching-learning at a distance (from student registration to certification) online. A few independent virtual institutions have arisen in the last decade, and some open universities (like the UKOU) and campus-based universities (like the University of British Columbia in Canada) have aggressively entered the realm of online teaching-learning. The most talked about is the Western Governors University in the US, which employs Internet, e-mail, CCTV, voice mail, audio and video, videoconferencing and postal service for offering competency-based programmes acquired through work and life experiences. Students may use the Internet to download instructional materials and then interact through e-mail. Also, they may meet at a fixed time for interaction through videoconferencing. In both cases the tutor facilitates the interaction. Online libraries and telephone counselling are in place for regular interaction, and the local centres provide for skills assessment, besides e-assessment.

Telelearning centres of IGNOU

The Indira Gandhi National Open University, India (IGNOU) has initiated a different version of a virtual campus. It offers a Bachelor of Information Technology with options for a Higher National Diploma in Computing and a Higher National Diploma in Computing and Multimedia. For student support, telelearning centres have been established using these teaching and support methodologies:

- Live satellite-based teleconferencing lectures supported through CD-ROM
 - Recorded video lectures
 - Practical laboratories
 - Computer-based training/tutorials
 - Internet learning resource by Internet browsing
 - Online interactive chat with peer groups, faculty and experts through fax, e-mail and telephone
- (Panda and Chaudhary, 2001)

CONCLUSION

There are a variety of approaches that have been successfully used to provide student support in TVET programmes through distance education. No single approach is sufficient to meet varying demands of students and industry. The student support mechanisms have to provide for cognitive as well as psychomotor and attitudinal aspects of learning in TVET programmes. What mode is used by an institution depends on a number of factors including financial and human resources. The technology available to distance education has the potential of providing quality student support required for delivering TVET programmes and has been successfully used by many distance education institutions. The cost of technology can, however, be a constraint on some systems. Innovative and alternative ways will have to be explored. Oliveira and Rumble (1992) have suggested the following alternatives:

- Fees could be increased to cover costs, or systems will have to be developed in which costs are borne by students.
- Student support technologies could be provided by organisations or companies seeking training rather than by the open and distance education institutions.

These options are available only in countries where students can afford such investments or where organisations and companies are supporting employees for upgrading or acquiring new skills. It is common for large companies to be willing to make such investments in their staff, but small and medium enterprises (SMEs) are unable to. In order to achieve the desired confidence of industry to the quality of TVET programmes through distance education, effective institution-industry partnerships are essential. Industry must be involved in carrying out labour market analysis and designing and delivering the curriculum, including the assessment of students.

Another set of people requiring training and upgrading of skills are those working in the informal sector. Upgrading skills can increase not only their earning capacity but the quality of goods and services provided by them. Since the informal sector is unorganised, it is also unable to make the investment required to enhance their mobility. To meet the demand of education and training of such people, the model of the study centre being followed in Germany, Spain and South Africa may be a suitable option. These centres will not only meet the education and training needs of the unorganised sector but other people who cannot invest in their education and training.

ACKNOWLEDGEMENTS

The author would like to express his sincere gratitude to Professor S.C. Garg and Professor S.K. Panda of Indira Gandhi National Open University, New Delhi, India for providing valuable input into this chapter.

REFERENCES

- Bates, A.W. *Technology, Open Learning and Distance Education*. London: Routledge, 1995.
- Carmichael, J. "Voice Mail and Telephone: A New Student Support Strategy in the Teaching of Law by Distance Education." *Distance Education*, 16, no. 1 (1995): 7-22.
- Leach, J. "Learning in Practice: Support for Professional Development." In *Supporting Students in Open and Distance Learning*. London: Kogan Page, 2000.
- Mills, R. "The Role of Study Centres in Open and Distance Education: A Glimpse of the Future." In *Supporting Students in Open and Distance Learning*. London: Kogan Page, 2000.
- Oliveira, J. and G. Rumble. "The Future of Vocational Education at A Distance." In *Vocational Education at A Distance: International Perspective*. London: Kogan Page and International Labour Office, 1992.
- Panda, S. and T. Jena. "Changing the Pattern: Towards Flexible Learning, Learner Support and Mentoring." In *Innovations in Open and Distance Learning*. London: Kogan Page, 2000.
- Panda, S. and S. Chaudhary. "Telelearning and Telelearning Centres in India." In *Telecentres: Case Studies and Key Issues*. Vancouver: The Commonwealth of Learning, 2001.
- Reid, J. "Managing Learner Support." In *Open and Distance Learning Today*. London: Routledge, 1998.
- Rumble, G. "Student Support in Distance Education in the 21st Century: Learning from Service Management." *Distance Education*, 21 no. 2 (2000): 216-235.
- Scott, C., A. Burns, and G. Cooney. "Motivation for Return to Study as A Predictor of Completion of Degree amongst Female Mature Students with Children." *Higher Education*, 35 (1998): 221-239.
- Simpson, O. *Supporting Students in Open and Distance Learning*. London: Kogan Page, 2000.
- Tait, A. "Planning Student Support for Open and Distance Learning." *Open Learning*, 15, no.3 (2000): 287-299.
- Wright, S. "Supporting Learners in the Workplace." In *Open and Distance Learning for Nurses*. London: Longman, 1989.

