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| MODULE: | 2a) Conceptual Origins of Open and Distance Learning |
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This Module section describes the conceptual development of distance education as an alternative method of education. It emphasises the importance of interaction in DE, and the impact of information and communication technologies in eliminating educational barriers and achieving the idealistic concept of open and distance learning. The section is based on the author's article in *Open and Distance Education* published by Universitas Terbuka (2007).

**Evolution of the ODL concept**

Modern *distance education* (DE) is said to have begun in 1963 (Perraton, 2007). In that year, the National Extension Institute was established in the United Kingdom, as a model for an open university. The methodology of DE, more recently known as *distance learning*, has given rise to the principle that education should and can be open to all. Open education, or *open learning*, is a vision of an educational system accessible to every individual with minimal restrictions. This philosophy stresses the flexibility of the system to eliminate problems caused by barriers of, for example, age, geographical location, time constraints, and economic situation (Bates, 1995). *Open and distance learning* (ODL) is therefore a system which combines the methodology of DE with the concepts of open learning and *flexible learning*. ODL is, of course, a very idealistic concept which in reality is difficult to implement. DE specialists believe strongly, however, that many ODL principles can be fulfilled better by DE methods than by conventional face-to-face (f2f) educational approaches.

The development of DE has been dominated by the philosophy of an educational method that uses pre-produced standardised materials to obtain economies of scale. This philosophy represents a paradigm that emphasises access to education, and the learner's need for independence. The desire to increase educational access was the main drive for many countries to adopt DE (Garrison, 1993). Moore (1993) believed that as long as materials have been prepared, learners have full autonomy to undergo their learning process on their own terms. Based on this access paradigm, DE has been considered as an "industrialised" type of education, and as the product of an industrial society (Peters, 1967).

According to Peters, the system of DE has many similarities with an industrial factory, with need for a clear *division of labor*, mechanisation of activities, orientation to mass production, standardisation of output, and centralisation of the system. Owing to these similarities, DE has been accepted by industrial society as a method of mass-producing trained labour. Peters argued that DE methods should also change in response to the changing demands of post-industrial society. This is even more the case in today's information society. Whereas the DE process previously relied on the use of pre-produced learning materials and correspondence, the addition of today's information and communication technology (ICT) to the process makes it possible to make DE individualised and interactive.

The educational needs of the post-industrial society are different from those of the industrial society, however. This is due to the constant changes in skill demanded by occupational and professional fields. The original correspondence-based mass-education model of DE (*section 2a*) does not meet today's demands for a one-on-one, interactive style of education capable of adjusting to educational needs and of developing an effective individualistic style of DE. The new ICTs, however, can add these features that were lacking in earlier DE models.

> Today's production methods, communication technologies, perceptions of problems and problem solving strategies can be overdue and obsolete tomorrow. (Peters, 1999)

On this basis, a DE paradigm is developing characterised by a fully effective two-way communication process between teachers and students, students and study materials, and between students and the educational institutions. A one-way process (i.e. presentation of learning materials in printed, recorded, or broadcast form), is complemented by two-way feedback between students and the teacher/ institution implementing the programme. Holmberg (1983) pointed out, that despite the fact that DE is designed for independent study, it should not be suggested can be abandoned with no study support services. Even though interaction in the form of *real conversation* may be difficult to achieve in DE, much can be done to ensure that a conversational atmosphere is made available to the students. Holmberg's 1983 concept of *guided didactic conversation* related to an effective two-way conversation in, for example, print over the telephone. The goals and spirit of this atmosphere are implemented in the sensitive design of the learning materials, assignments, and study supports. Via good materials, the students can obtain an 'atmosphere' as in a conversation with the lecturer who developed them, and this in turn helps the internalisation process whereby the materials assist the students to learn.

G*uided didactic conversation* emphasises the importance of:

1) a clear presentation of learning materials, using easy-to-understand language;
2) explicit directions on what to do and not to do, and on what to observe, and the reasons;
3) a design that encourage students to discuss, ask questions, and judge the materials to consider;
4) an effort to motivate students so that they are interested in the materials and subject matter;
5) a personalised style of writing, including the use of the first person; and
6) a clear boundary between separate themes and topics: e.g. by stating the changes explicitly, or in producing recorded materials by using a different dubbed voice.

According to Sewart (1984), however, pre-produced learning materials can not replace the functions and roles of conventional teachers entirely. The absence of timely feedback for DE students may adversely affect the outcome of their studies. Students have different needs that the learning materials may not anticipate, and which cannot be satisfied by mass-produced learning materials. Accordingly, Sewart emphasises the importance to students of organised learning support services. One type of support is the tutor-counselor who acts as a subject-matter expert responsible for guiding students academically and personally. Sewart believes that a tutor-counselor who functions as both lecturer and mentor can significantly improve the quality of the DE teaching and learning process. The development of new ICTs such as audio/video-conferencing has further enhanced this guided didactic process, by reducing the gap between the *teaching act* and the *learning act* that previously created psychological and *transactional distance* in the learning process (Moore, 1993).


**From Distance Education to Open Education**

The benefits of modern ICTs have also generated a broader way of thinking about DE. Solutions to the problems of physical separation between teacher and learner in DE enable the broader use of educational facilities. When the teaching acts and learning acts can be effectively achieved in non-real time (asynchronously), two major problems are reduced:  1) the traditional lecturer/students ratio which commonly limits the *absorption capacity* of education, and  2) the classroom walls that commonly limit the *transmission capacity* of education. Overcoming these hurdles transforms the educational process from one that is closed in nature to one that is physically more open, and education is no longer associated with the physical classroom.

The development of social economies over the last four decades has also modified the typical requirements for an education. Whereas during its early industrialised form, DE was essentially a vehicle for supplying a skilled labour force, the post-industrial society is moving towards improving the quality

of human lives. In the post-industrial era, education is focuses more on *self-realisation* and fulfillment of personal needs: e.g. to improve happiness and satisfaction with life (Peters, 1993). The need for education is no longer limited to a particular "school age" group, but relates to the needs of all people to pursue lifelong needs. This is shown by the increasing popularity of nonformal and continuing education programmes that offer *leisure* rather than accreditations. In addition, the advancement of technology and service industries has changed the type of skills required in the labor market (Peters, 1999). This has resulted in an increasing need for *professional continuing education*; and the concept of DE itself has been broadened from a simple distance training model to incorporate continuing education.

DE can therefore be seen as a method appropriate for the pursuit of various educational objectives, including professional skills improvement, enhancement of hobbies, and self-actualisation. In developing countries, whose people live in a limited economy and in isolated rural areas, DE is seen as a means to provide a second chance to those who cannot study in the face-to-face (f2f) system. DE has become more than a simple alternative learning system, and is uniquely capable of boosting the openness of education, by minimising restrictions of time, place, and economy, and of demographics such as age and educational background.  The concepts of *life-long learning* and *education for all* stress that every person should have the opportunity to study and to receive a life-long education. An explicit acknowledgement of this open education concept was made by UNESCO (1996):

> Education is a basic human right and a universal human value and should be made available over the entire lifetime of each individual.

The *open university* (OU) model is designed to provide this highly customised, individualised form of education. It requires a network of regional offices and learning centres, a strong central management, organisational structure and operational system, and high initial capital investment (*see section 2b*).  An estimated 44 universities worldwide have at least 100,00 students (Wikipedia, 2008), and have been labelled *mega-universities* (Daniel, 1996).  Of these, 18 are in Asia, including seven in India alone with a combined student population of approximately 2.938 million (Table 1).  Wikipedia currently lists seven Asian OUs among the ten largest universities.  It may be argued that the China Central Radio and TV University, with approximately 2 million students, should be included at the top of this list, though technically the CRTVU is a combination of separate institutions (*see section 6a*).

Table 1. The world's largest ten mega-universities (Wikipedia, 2008).

| Rank | Institution | Location | Founded | Student enrollment |
|---|---|---|---|---|
| 1 | Allama Iqbal Open University | Islamabad, Pakistan | 1974 | 1.8 million |
| 2 | Indira Gandhi National Open U | New Delhi, India | 1985 | 1.4 million |
| 3 | Islamic Azad University | Tehran, Iran | 1982 | 1.3 million |
| 4 | Anadolu University | Eskişehir, Turkey | 1982 | 884,081 |
| 5 | Bangladesh Open University | Gazipur, Bangladesh | 1992 | 600,000 |
| 6 | Dr. Babasaheb Ambedkar OU | Andhra Pradesh, India | 1982 | 450,000 |
| 7 | State University of New York | New York, USA | 1948 | 418,000 |
| 8 | California State University | California, USA | 1857 | 417,000 |
| 9 | Universitas Terbuka | Jakarta, Indonesia | 1984 | 350,000 |
| 10 | Universidad de Buenos Aires | Buenos Aires, Argentina | 1821 | 316,050 |
| 11 | Osmania University | Hyderabad, India | 1918 | 300,000 |
| (...) | | | | |
| 17 | University of Delhi | New Delhi, India | 1922 | 220,000 |
| 18 | Yashwantrao Chavan Maharashtra Open University | Nashik, India | 1989 | 218,000 |
| 22 | University of Calcutta | Kolkata, India | 1857 | 200,000 |
| 23 | Korea National Open University | Seoul, South Korea | 1982 | 196,402 |

| 26 | Payame Noor University | Tehran, Iran | 1987 | 183,000 |
| 27 | Sukhothai Thammathirat Open U | Bangkok, Thailand | 1978 | 181,372 |
| 33 | Tribhuvan University | Kirtipur, Nepal | 1918 | 150,000 |
| 34 | Madhya Pradesh Bhoj Open U | Bhopal, India | 1991 | 150,000 |
| 42 | Shanghai TV University | Shanghai, China | 1960 | 101,218 |
| 44 | Universiti Teknologi MARA | Shah Alam, Malaysia | 1956 | 100,000 |

**Enhancing Openness: System design and technology**

Although the concept of open education has been widely publicised, no DE provider has yet succeeded in being 100% open. In practice, many institutions offering DE programmes still employ admissions rules that reduce openness. The openness of DE can be enhanced by the design of a more flexible learning system (Belawati, 1999); e.g. through:

- *an open entry/exit system*: individuals can start and finish the process at any time of year, according to personal circumstances;
- *no selection criteria:* any person registering for a programme will be accepted as long as s/he meets the minimal basic qualifications required to support the educational process;
- an *open registration system*: each individual can register openly, either for a full programme (e.g., certificate, diploma or bachelor's) or for certain disciplines. Open registration should also allow students to accumulate the credits of previous courses in order to qualify.

The design of an educational system that complies with these three points will enhance the openness of DE. The response to DE programs offered through the Internet shows that public demand and needs for education of this type are high. DE has been a major proponent of new educational media in this manner (*section 4a*). Institutions providing education exclusively by traditional f2f methods *or* by DE methods, as in open universities, are known as *single-mode.*

In the early 2000s, the openness of education has been enhanced by new technologies. *E-learning* has been defined as any learning process which uses Internet, both for delivering learning content as well as for enabling interaction between the students and their teachers (Belawati, 2003). The widespread penetration of e-learning in education has been greatly enhanced by the emergence of open source software (OSS), which makes *learning management system* (LMS) software widely available and often without cost. With such software, ODL can be established and maintained with relatively low investment. E-learning has also made it possible for ODL to be interactive, personalised, and inexpensive, while increasing its geographic and socio-demographic coverage. As a result, e-learning has promoted the notion of ODL favourably to educators who previously looked down upon it, and has stimulated many non-ODL institutions to provide DE programmes in addition to their regular f2f offerings. By doing so, they become *dual-mode* institutions. A collaborative arrangement between multiple DE institutions, usually for course-sharing purposes, is known as a *consortium.*

These advances have been enabled primarily by the development of the hardware of DE and ODL, and by major advances in the *Open Educational Resources* (OER) movement: i.e. the free and open availability of digitised materials to educators and students for use and re-use in teaching, learning and research.

The increasing use of sophisticated hardware and software systems cannot wipe out the use of printed materials altogether, of course. Print materials are still the dominant delivery method in many DE institutions, and high-end technologies are used merely as supplementary support for the teaching and learning process. Each technology/ medium has a different capability in relation to accessibility and interactivity, and while many sophisticated ICTs are in place to facilitate distance-based interaction, the general public's access to them is still limited. Panda (2005) has reported that online programmes at Indira Ghandi National Open University (IGNOU) in India have only been successful in reaching "the digitally rich who have access to the Internet or can manage to visit learning and teaching centres

regularly". Furthermore, the high costs of sophisticated technologies of this sort, for both students and institutions, do not appear to be diminishing and will require "major increases in expenditure" (Perraton, 2007). In addition to the accessibility and cost problems, there are capability, technical support, regulatory, applications, and political barriers (Latchem, Lockwood & Baggaley, 2008). These may take many years to resolve in some developing countries, if they ever are resolved. The convergence of systems design and high-end ICT is just one small step towards enhancing the openness of education to the full.


## Conclusions

ODL is a concept that emerged from the correspondence methods of DE's industrial society era. The DE system has since evolved in keeping with the demands of society in the post-industrial era, and is oriented more towards self-realisation and fulfillment of personal needs. In addition, the new era's technological developments have increased the demand for the continued training of professionals, and this shift in orientation toward continuing education has encouraged a more open educational concept of lifelong learning for all. ICT advances have made it possible to enhance the interactive capability of DE. In many countries, however, focusing on the use of sophisticated technologies can decrease public access to education. The selection of appropriate technologies and the design of learning systems are therefore crucial in determining the level of openness of a DE system. Conceptually, ODL is a system intended to overcome the constraints of distance, both temporally and spatially, economic factors, and demographic limitations, with the ideal of opening up educational opportunities for all.


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