Expanding the Quantity and Continually Improving the Quality of Higher Education through Open and Distance Learning: The Experience of Universitas Terbuka, Indonesia

> Aminudin Zuhairi & Endang Nugraheni Universitas Terbuka, Indonesia aminz@mail.ut.ac.id, heni@mail.ut.ac.id

Abstract

This paper addresses ways and means of expanding the quantity and continually improving the quality of higher education through open and distance learning (ODL), based on the experience of Universitas Terbuka, Indonesia. The discussion begins with the fundamentals of distance education, followed by the principles of quality assurance and its implementation in distance education. Then, it presents some illustrations on participation in higher education through ODL in SEAMEO Member countries. Quality improvement is a major challenge in ODL, and effort and initiatives have been put forth to implement quality assurance system in ODL in SEAMEO Member countries. The paper also presents specific experience and lessons learnt from Indonesia, particularly Universitas Terbuka (UT), in responding to the issues of quantity expansion, improvement of student participation in higher education, and continual quality improvement of ODL.

Introduction

The development of open and distance learning (ODL) has continued to flourish because of its capability to meet the diverse and changing needs of the stakeholders. The nature of ODL has further changed significantly thanks to advances in the use of information and communication technology (ICT). The ODL system is challenged to meet the changing needs of the clients, whose paradigms are shifting from the industrial age to the knowledge age. Although the mode of learning delivery in ODL is still predominantly through printed materials, ICT has opened up new opportunities for implementing to new approaches to teaching and learning at a distance, so that ODL becomes flexible and responsive in its delivery. Consequently, ODL system is capable to reach wider audience who formerly could not enter conventional face-to-face mode of education. It has proved that ODL could accommodate more quantity of students cost effectively. The developing countries could speed up national human resource development to meet global standard, using ODL as the best possible answer. ODL system allows SEAMEO (Southeast Asian Ministers of Education Organization) member countries to be capable of providing greater and more flexible educational opportunities for their citizens.

ODL institutions are obliged to deliver high quality education, and be able to develop quality products, processes, services, and meet the needs of the clients. Quality has become growing concerns of stakeholders who demand quality provision of education. There has been increasing interests of stakeholders to have more accountable educational system as the result of increasing users' contributions to educational endeavor. Educational institutions need to respond appropriately to the challenge for developing quality human resources by incorporating a quality assurance system. Quality assurance is a systematic, comprehensive and continual improvement process aiming at meeting customers' expectations.

The general rule of quality improvement is that more resources and

increasing costs are needed to improve the quality of educational services. There is, however, paradox in distance education because quality distance education can be provided to reach a lot more number of students, while the use of resources and costs can be maintained at relatively low level. This phenomenon is a blessing for the developing countries in responding to the needs of quality education in all sectors and levels

SEAMEO Member countries generally apply distance education system despite the fact that they may have different national policies, priorities and organizational systems at country level. ODL has gained interests as reflected in the growing number of distance students. Efforts in cooperation have been made in the region so that best practices can be shared and lessons learnt for improvement can be gained from the experience of different SEAMEO Member countries and among distance education institutions globally. ODL has been implemented in SEAMEO Member countries to improve access and participation. Policies and practices in distance education vary from country to country, but the general norm is that they are aiming at reaching out the unreachable within the society.

Expanding quantity and participation of students in higher education through ODL in SEAMEO Member countries

Rapid technological change and the emergence of a knowledgebased society have necessitated education system worldwide to provide higher education opportunities to meet rising challenges and expectations of stakeholders. To keep up with dynamic changes of stakeholders' demand, higher education provision should be expanded using various modes of delivery beyond the conventional face-to-face mode to allow for easy access and greater flexibility by the users.

The needs for higher education are not limited to the young and fresh graduates of secondary schools but also for the older members of the society that already have jobs in various professions. ODL system is

one of the emerging flexible systems in delivering higher education capable of accommodating a lot more number of students compared to the conventional university system. ODL provides opportunities to all those who are unable to pursue their higher education through the faceto-face mode of educational system. It allows for a wider audience, meets the needs of students unable to attend classroom instructions, allows self-paced learning, provides innovative approach to learning and teaching, enables flexible cost-effective education, and provides self-explanatory and user friendly learning materials appropriate for target group. As a result, ODL is an effective instrument to increase access to education and promote equal opportunity in education. It is rapidly gaining acceptance everywhere. For the developing countries, ODL provides quality education at affordable costs by the users. ODL reaches out the unreached and has the ability to accommodate a very large number of students so that it helps developing countries catch up with the dynamic changes in social, economic, technological and many other aspects of the daily lives of the people.

SEAMEO member countries, which are geographically located relatively near each other, are very diverse in their social and economic conditions, as well as educational achievement for their citizens, as reflected in their Human Development Index (HDI) of individual countries. HDI is a standard means of measuring human development which includes normalized measures of life expectancy, literacy, educational attainment, and GDP per capita. According to the United Nations Development Program (UNDP), HDI is a concept that relates to the process of widening the options of persons, giving them greater opportunities for education, health care, income, and employment. According to HDI measurement, there are 5 SEAMEO member countries that belong to the rank of developed countries, and the remaining of 5 member countries are grouped as developing countries. The developed countries are Singapore, Brunei, Malaysia, Thailand, and Philippines, while the developing countries are Indonesia, Vietnam, Lao PDR, Cambodia, and Myanmar (ASEAN, 2004).

Almost all of SEAMEO member countries have been employing ODL

to some extent. Both for the developed and developing SEAMEO member countries are reported to employ ODL, except for Brunei. This country has a small number of people which is relatively well accommodated by means of conventional education, even though it has also considered in the future that ODL might enhance further education and training for people who wish to continue studying while working (Simbran, 2006). For SEAMEO developing member countries, ODL will provide access to higher education for those people living in remote areas, whether they live on the continent, such as those in Vietnam, Myanmar, and Cambodia, or in scattered islands such as those in Indonesia, and the Philippines. ODL also provides equal opportunity in education since it is less costly, and thus it will benefit persons with less economic opportunities. Therefore developing countries of SEAMEO are willing and have incorporated ODL into their national education policies and strategies. While in some countries such as Lao PDR, further encouragement through outside funding is needed for the development of its ODL system (Souvannasy, 2006).

ODL also proliferates in the developed countries of SEAMEO. Thailand has been offering ODL since 1978 to provide equality of educational opportunity, irrespective of age, place, gender or occupation, and to increase opportunities in higher education for those already in the workforce (Vesarach, 2006). Singapore recently opens SIM University (UniSIM) that provides opportunities to working adults. There have also been efforts by local professional bodies, business organizations and education-related agencies to collaborate with foreign universities to deliver ODL programs targeted to attract full-time foreign students from mainly the South- and East-Asian regions (SEAMOLEC, 2006). Since there is high number of population in the surrounding regions, it is considered economically plausible to offer ODL programs that are high demand in the region. This strategy might well be followed by Malaysia. Despite the valuable benefit for the local population, ODL is also targeted to attract foreign students, as revealed in their efforts to collaborate with foreign institutions (Ali et al., 2006).

For the future, it seems that ODL is going to gain more and more acceptance in the region. Almost all ODL institutions have begun to redefine and embrace the latest concept and best practice of ODL. They are moving from traditional correspondence to ICT-based ODL system. It is obvious that ODL system is a major catalyst in generating knowledgeable, skilled, and competent human resources to fulfill the needs and vision of the nations. The system is viewed as the most practical method to bring about the democratization of higher education, provide equal opportunities by allowing students to study independently in their homes, and have the opportunity to work and study at the same time. This is clearly reflected in the demand for higher education among the adult working population for self-development and upgrading of skills that have increased tremendously in the region.

The number of students ODL institutions in SEAMEO member countries is increasing rapidly. Many institutions have reported unexpected high number of students on their first registrations. Universitas Terbuka (UT) in Indonesia has reported that its first year student enrolments reached more than 50.000 students when it began operation in 1984 (Setijadi, 2007). Thailand's Shukhotai Thammathirat Open University (STOU) enrolled around 82.000 students for its first registration in 1978 (Vesarach, 2006). The significant number of ODL enrolments in the first year of operations in these two SEAMEO member countries was closely related with the large number of population in both countries.

At present, UT has been one of the worlds' mega-universities with more than 500.000 students. Malaysia's ODL students are nearing 100.000. Vietnam ODL students are around 125.000. Myanmar ODL students are nearing 200.000. Even for the small country like Singapore, its UniSIM, the ODL institution in the country, has about 6.000 students (SEAMOLEC, 2006). Therefore, in all SEAMEO member countries, it can be estimated that the number of students could reach more than 1.000.000 students. It can be said that quantitatively ODL has reached a large number of students and provided them with opportunities to

attend higher education. This number continues growing each year as reported by each ODL institution (SEAMOLEC, 2006).

These numbers reflect that ODL has played important roles in the human development effort in the region. Influenced by changes in the rest of world, reforms, new policies, innovations have been embraced to integrate ODL into the national educational system. This has led to the expansion of educational opportunities and greater diversification of forms of education. Therefore, optimistically it could be stated that quantity expansion and participation in education through ODL system can be achieved more effectively in the future. At the same, quality will have to be improved continually to ensure that stakeholders' expectations can be effectively met.

Improving the quality of higher education through ODL in SEAMEO Member countries

As in any other countries of the world, the Southeast Asian region has to cope with the challenges of improving the quality of human resources in response to the changing world scenario as the result of globalization and the development of the knowledge economy. Countries are getting more dependence or the quality of knowledge that their human resources possess. ODL system has been practiced for while to cater for the growing demand for more flexible access to educational provision by the society and stakeholders. Just as ODL implementation varies, the quality of ODL provision varies from one country to another, from one system or institution to another within the SEAMEO Member countries.

Some of the institutions have their experiences in establishing quality assurance system that could be learnt. ODL system in the Philippines has applied high technology mode of learning, so that ICT-based quality assurance system has been implemented and is supported by highly skilled individuals. Besides they employ the 'quality circle' approach in developing ODL courses and learning

materials. The 'quality circle' consists of the course writer (who is a subject matter expert), a subject matter specialist (another subject matter expert who peer reviews the soundness of the course and its contents), an instructional designer (who ensures the 'chunking of lessons' is appropriate and that the program/course goals, contents, and assessments mesh logically with one another), a media specialist (who recommends appropriate delivery mediums), a language editor (who performs copy and substantive editing). In sum, whatever the technology used to deliver instructional content, the 'quality circle approach' to course development should be standard practice (Pena-Bandalaria, 2007). In Malaysia, Universiti Putra Malaysia (UPM) has established its internal quality assurance system through various committees whose job is to evaluate their distance education practices, and externally it is subjected to ISO 9000 quality management system, which supports total quality, administration, and management (Ali, et al., 2006).

Expanding quantity and participation in education through ODL: experience of UT

Quantity expansion and quality improvement can go hand in hand in ODL system. Distance education has not only the capability to serve a large number of students and the flexibility to accommodate the various needs of clients. ODL in Indonesia has major roles in ensuring that there is equal access and equal opportunity for participation in quality education at different levels for all citizens of Indonesia. ODL has been implemented in various sectors and levels of education, in formal, non-formal as well as informal education.

UT has specific roles in Indonesian higher education because of the flexibility and openness it can offer. Considering the geographic and demographic characteristics of Indonesia, UT meets the needs of the clients with unique requirements. Despite the diverse characteristics and the large number of the campus-based higher education institutions, many of them are located in major cities. There are people, particularly

working adults who live in remote areas, villages and smaller towns who need access to quality higher education. UT serves well the needs of these particular groups of clients.

In expanding the quantity of students UT relies on the role of its regional offices (RO) throughout the country. ROs serve as the front offices of UT whereas the real contact with students happens. Strategy and efforts of acquiring more students are developed by each RO since the scheme of funding and incentives is in line with numbers of students registered in each RO. Coordinated by Vice rector IV, UT through its ROs also actively seeks out scholarships for its students from the local government (PEMDA), since there is a national policy which advocate local government to increase their local human resource development especially for teachers education. By this means there are significant numbers of teachers who receive scholarships for further their education through UT. According to Vice Rector III of UT about 40% of teacher education students were receiving their local government scholarship last year.

Total number of students in teachers education program at UT is well exceed the total number of all other study programs, which mainly due to the government policy in increasing the teachers qualification throughout the country without leaving their teaching duty. Therefore the large number of UT's student body is a reflection of this policy. However in the long run UT should not always depends on the government policy. Some efforts on curriculum diversification should be made, so that study programs offered by UT are aligned with society needs. Therefore, every decision of opening new study program should be done by considering a feasibility study first. This study is also to ensure that there will be sufficient number of students enrolls and economically feasible.

In expanding the number of students other than teachers' education, UT also develop partnership with other department such as the department of agriculture for opening special study programs to further the education and training of their human resource. This form of cooperation could be for opening undergraduate degree programs, graduate program, or continuing education programs. These programs are designed as tailor made program according to clients' needs. In the future some collaborative programs with other educational institutions are also going to be developed. The key success is that there should be flexibility and responsiveness in the opening and closing of every study programs according to society needs. Last but not least is the effort of expanding numbers of students by means of marketing and promotion of UT's available study programs.

Improving quality of ODL: experience of UT

Quality improvement of ODL system has been driven by internal pressures as well as external forces. An example of quality improvement practices will be presented based on the experience of Universitas Terbuka (UT), Indonesia. UT has been in operations since 4 September 1994, and she will be 24 years old in 2008.

Quality assurance system is a systematic, comprehensive and continual effort to improve the quality of products, processes, services as well as philosophies of the UT distance education practice. The quality assurance system is the prerequisite for the UT consistent commitment in implementing total quality management system to achieve good corporate governance. Like in any quality assurance system, prevention and continual improvement are important principles to ensure that the systems and procedures are fully implemented in order to meet defined sets of quality standards.

The changing paradigm, scenario and legal foundations of distance and higher education in Indonesia has required UT to develop and consistently implement quality assurance system, aiming at continual improvement and adopting the Asian Association of Open Universities (AAOU) Quality Assurance (QA) Framework. UT has modified the statements of best practices of the AAOU QA Framework and developed indicators that are relevant and fit into the UT context in

Indonesia.

Quality has become important priorities of government and higher education institutions in Indonesia, including UT, to ensure provision of quality higher education. Since 2001, UT has started concrete actions for quality improvement through its Operational Plans 2001-2005, focusing on the improvement of academic quality, student participation and internal management (UT, 2001). This policy is then followed with the establishment of Quality Assurance System Committee, with the main mission to develop quality policy for UT as a distance higher education institution, published in a document called Sistem Jaminan Kualitas Universitas Terbuka — Quality Assurance System of Universitas Terbuka(UT, 2002). This quality policy was then soon followed up with documenting procedures, work instructions, relevant records of activities, preceding the establishment in July 2003 of a Quality Assurance Centre, a specific unit dedicated to quality assurance and performance assessment.

The year 2004 has been the official beginning of the UT "Era of Quality Assurance". This means that quality assurance procedures are fully implemented and integrated into concrete activities involving participation and supervision of management to staff, and quality work cultures are established to achieve efficiency, effectiveness and ultimately UT vision. Implementation of quality assurance system fundamentally changes the existing management practices and involves all people within the institution. Systems and procedures are implemented consistently and improved continually. Management has responsibilities to set examples, supervise, coach and train staff in implementation of quality assurance system. Activities of units and business process owners are carefully evaluated, monitored, and provided with feedback and recommendation for improvement.

UT has developed Strategic Plan 2005-2020 and Operational Plan 2005-2010, focusing on quality improvement of the core competence of the institution, i.e., (1) academic quality and relevance, (2) access to services, and (3) internal management. These plans are further

elaborated into Main Program, Program, and Target Indicators in order to achieve the UT vision "to become one of the centers of excellence in distance higher education in Asia by 2010 and in the world by 2020". The UT quality assurance system is a comprehensive approach to assure the quality of distance education in terms of process, products, services, and philosophies as applied to and in response to the specific needs of the Indonesian society.

Starting in 2003, UT implemented 113 procedures for various activities of distance education operations. Then the following year in 2004, 194 procedures were used, and revision and improvement of the procedures have been conducted continually. Beginning in 2005, the ISO 9001:2000 quality management system has been adopted, and the first ISO 9001:2000 certificate in learning materials distribution services was awarded in March 2006. Improvement of the UT quality management system continues with further effort to seek certification for more variety of business processes in the following years, coordinated by the Quality Assurance Centre.

The UT quality assurance system has been attempted to establish a sense of belonging, commitment and quality culture of all management and staff. The challenge for the top management is to manage innovation and change in work culture effectively through continuous socialization and training. As a major provider of distance higher education in Indonesia, UT has the responsibility to assure the quality standards of its services and improve it continually. UT quality assurance system includes comprehensive components of distance education practice, including policy and planning, human resource provision and development, management and administration, students, program design and development, course design and development, learning support for students, assessment of student learning, and media for learning.

Quality assurance involves continual evaluation through internal as well as external assessment and accreditation. Internal and external quality audits are conducted periodically every six months to maintain consistency and achieve efficiency. UT has attempted to achieve international quality standards of distance education partice. External

assessment has been conducted by the International Council for Open and Distance Education (ICDE) Standards Agency (ISA) and through certification of ISO 9001:2000 for the quality management system of UT core business processes.

External assessment was conducted in 2005 by the International Council for Open and Distance Education (ICDE) Standards Agency (ISA), leading to the award of Quality Certification and International Accreditation. ICDE audit focused on student services. Preparation for the ICDE audit began in 2004, when UT approached ICDE for the assessment. ICDE responded positively by sending checklists for UT to prepare a portfolio of the institution for review by the appointed ICDE Auditors. Then, on-site audit was conducted for one week in June 2005 in UT Headquarters and 3 Regional Offices, i.e. Jakarta, Bogor, dan Denpasar. Findings and recommendations of the audit was officially informed to UT in August 2005, followed by presentation of the Award on the 15th of September 2005.

Effort to improve the quality management system of learning materials distribution through ISO 9001:2000 certification began in the middle of 2004, involving not only the Learning Materials Service Centre as the main process owner but also supporting units relating to procurement and distribution of learning materials. Hard work and strong commitment of all personnel involved resulted in successful implementation of quality management system and award of ISO 9001:2000 certificate in learning materials services in March 2006. The system ensures that the distribution of learning materials is efficient and timely. This is the beginning in the implementation quality management system based on ISO 9001:2000 in UT, which has since then followed by certification in other business processes.

Implementation of quality assurance system in the academic areas began with the development of learning materials and examination materials to ensure that students quality learning materials to support learning process and examination. Preparation for the certification of ISO 9001:2000 in the development of learning materials and examination

began in 2005 with the appointment of Preparation Committee by the Rector. Chaired by Vice Rector Academic and facilitated by the Quality Assurance Centre, members of the Committee came from relevant units, including the Institute of Learning Materials Development, Examination, and Information System; Faculties; Printed Materials Development Centre; Non-Printed Materials Development Centre; Examination Centre; Bureau of General Administration and Finance. The ISO 9001:2000 certificate in the development of learning materials and examination was awarded in September 2007.

Regional Office has central roles in student services and image building, and this has triggered strong interest to improve the quality of Regional Office distance learning services through ISO 9001:2000. Effort began in 2005, and the ISO 9001:2000 certificates were awarded in 2007 to 11 Regional Offices, namely (1) Surabaya, (2) Semarang, (3) Palembang, (4) Bandung, (5) Yogyakarta, (6) Jakarta, (7) Pontianak, (8) Bogor, (9) Purwokerto, (10) Padang, dan (11) Malang. The Vice Rector Operations and Students Affairs chaired the Preparation Committee, facilitated by the Quality Assurance Centre, and supported by members from relevant units, i.e., the Institute of Learning Materials Development, Examination, and Information System; Learning Materials Service Centre; Examination Centre; Bureau of General Administration and Finance; Computer Centre; and Bureau of Academic Administration, Planning and Monitoring.

In the following years, further effort is done to improve the quality management system in more areas of UT main business processes. Since the beginning of 2008, ISO 9001:2000 certificate has been awarded in the area of academic administration services as part of the effort to assure the quality of registration and academic services to students. Preparation for ISO 9001:2000 certification in 2008 is underway for the management and partnership and promotion in UT Headquarters and for distance learning services in 14 Regional Offices, i.e., (1) Medan, (2) Pangkalpinang, (3) Jambi, (4) Bengkulu, (5) Bandar Lampung, (6) Serang, (7) Surakarta, (8) Denpasar, (9) Palu, (10) Kendari, (11) Manado, (12) Gorontalo, (13) Makassar, and

(14) Jember. Considering the importance of improving the quality of occupational health and safety, intensive preparation is also conducted for OHSAS 18000:2007 in 2008. Financial management is also given a serious attention with the preparation for audit to secure a government statement of Wajar Tanpa Pengecualian, meaning that UT has a sound financial management system.

For the year 2009, the remaining 12 Regional Offices were awarded ISO 9001:2000, i.e., (1) Banda Aceh, (2) Pekanbaru, (3) Mataram, (4) Palangkaraya, (5) Banjarmasin, (6) Samarinda, (7) Kupang, (8) Ambon, (9) Ternate, (10) Jayapura, (11) Batam, and (12) Majene. Step-wise preparation is also being done to improve the quality of information technology services through implementing the ISO 20000 Information Technology Service Management (ITSM).

Challenges and lessons learnt from quality assurance system implementation

Distance education system is based on the egalitarian philosophy that everyone has equal opportunity to have access to education, including higher education. Distance education system has a high degree of flexibility and accessibility to allow for the implementation of quality higher education for all with geographic, social economic, time and other constraints. Distance higher education has become one of the effective instruments for sustainable social and economic development, and has been integrated into the educational mainstream to help achieve a modern knowledge-based society in any country. UT has developed itself to become a mega-university with a total student body of 527,995 (as of June 2008) and effectively serves the diverse needs of the society for quality higher education.

At national level, the government policy in higher education is stated in a document Strategi Jangka Panjang Pendidikan Tinggi 2003-2010(Higher Education Long Term Strategy 2003-2010), addressing three major areas, i.e., nation's competitiveness, autonomy and organizational health. One strategic issue in organization health is quality assurance, which is the put into practice in a document Pedoman Penjaminan Mutu Pendidikan Tinggi(Quality Assurance Guideline for Higher Education).

At institution level, UT has developed Strategic Plan 2005-2020 and Operational Plan 2005-2010, focusing on three main areas of improvement, i.e., (1) academic quality and relevance, (2) accessibility of services, and (3) internal management. Implementing quality assurance means establishing an internal mechanism that also involves internal as well as external assessment. Internal assessment includes continuous monitoring, evaluation and audit. External assessment is conducted by credible accrediting agency, such as International Council for Open and Distance Education (ICDE) Standards Agency (ISA), International Organisation for Standardisation (ISO), and National Accreditation Board of Higher Education.

Implementation of quality assurance system requires formulation of quality policy and target, documentation of systems and procedures, continual improvement and development of human resources. To ensure effectiveness of implementation, it is important to involve and share responsibilities with all management and staff. Quality certification and international accreditation is sought to ensure continual improvement takes place, and it has never been meant as an end itself.

Conclusions

ODE has been an effective instrument in expanding access and allowing improved participation in quality higher education. ODE has the flexibility to reach the unreached group of the society, provide greater opportunities for citizens from all walks of life, and offer the best possible educational services to the highest level that is affordable and accessible by the users. For SEAMEO Member countries ODE has gained higher reputation, better public image, and enhanced roles in expanding quantity and improving the quality of higher education.

References

- Ali, A, Fadzil, M., & Kaur, A., 2006. Open distance education in Malaysia. Downloaded July, 27, 2008 at http://www.seamolec. org/odl-profile-southeast-asia/year-2006-3
- ASEAN. 2004. ASEAN Statistical yearbook. Downloaded July, 27, 2008 at www.aseansec.org/syb2004.htm
- Pena-Bandalaria, M. 2007. Impact of ICTs on Open and Distance Learning in a Developing Country Setting: The Philippine experience. International Review of Research in Open and Distance Learning, Volume 8, Number 1. ISSN: 1492-3831. March – 2007.
- SEAMOLEC. 2006. ODL Profile in Southeast Asia. SEAMEO-SEAMOLEC.Downloaded July, 27, 2008 at http://www. seamolec.org/odl-profile-southeast-asia/year-2006-0
- Simbran, A.O. 2006. Open and distance education in Brunei Darussalam, a paper presented at the Ninth SEAMOLEC GB Meeting, 12-13 September 2006, downloaded July, 27, 2008 at http://www.seamolec.org/odl-profile-southeast-asia/year-2006
- Souvannasy, S. 2006. Open and distance education in LAO PDR. Downloaded July, 27, 2008, at http://www.seamolec.org/odl-profile-southeast-asia/year-2006-2
- UT. 2001. Rencana Operasional Universitas Terbuka 2001-2005. Jakarta: Univeritas Terbuka.
- UT. 2002. Sistem Jaminan Kualitas Universitas Terbuka. Jakarta: Universitas Terbuka.
- UT. 2004. Rencana Strategis Universitas Terbuka 2005-2020. Jakarta: Univeritas Terbuka.

- UT. 2004a. Rencana Operasional Universitas Terbuka 2005-2010.

 Jakarta: Univeritas Terbuka.
- Vesarach, P., 2006. Open and distance learning (ODL) in Thailand, downloaded July, 27, 2008 at http://www.seamolec.org/odlprofile-southeast-asia/year-2006-7.