



THE DEVELOPMENT OF STANDARDS FOR ICT-BASED OPEN AND DISTANCE LEARNING SYSTEM FOR SOUTHEAST ASIAN COUNTRIES

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Summary

SEAMEO SEAMOLEC is a regional institution of SEAMEO (Southeast Asian Ministers of Education Organization). The main function of SEAMOLEC (SEAMEO Regional Open Learning Center) is capacity building for any institutions in the region to offer ICT-based Open and Distance Learning (ODL) programs. SEAMOLEC has published The Guideline for Quality Assurance in Open and Distance Learning for Southeast Asian Countries (SEAMOLEC, 2007). Following up the manual, SEAMOLEC is developing the detail standards for ODL system for the SEA countries based on the best practice of ODL from all over the world.

This paper will describe the development effort of the indicators for the standards to evaluate an ODL programs. The development of the indicators of the standards is conducted by experts from institutions who have been involved in any form of ODL.

It is expected that the Standards for ODL for the SEA countries will help the cooperation among those countries related to transborder education

Introduction

The rise of open and distance learning (ODL) system, the emerging practices of teaching and learning activities enhanced by the advancement of information and communication technology (ICT-based teaching and learning) in conventional as well as ODL settings, and the popular trend of transborder education, have put higher demand on the quality of education from stakeholders and the public at large. The demand of quality education has also been increasing with the emergence of global lifelong learning movement in which the new lifelong learners opt for ODL system to enable them to study while still meeting their social and professional responsibilities. Within all those situations and conditions, the quality of ODL system becomes a priority for everybody, i.e.: the students as the users of the educational services (or the recipients), the stakeholders who provide policy, regulations, and/or funding for the operation of educational services, and the academic community within the education world itself. Combined with transborder education, proliferation of new higher education providers, and increased web-based delivery of higher education, the quality of ODL system is thus challenged furthermore.

ICT has also been a major issue concerned by Southeast Asian Ministries of Education Organization (SEAMEO) as stated in its 2006 and 2007 resolutions of the 41st and 42nd SEAMEO Council. ICT is perceived as enabling tool to expand and improve quality of education across the Southeast Asian region, through ICT-based networking or virtual networking among educators and educational institutions, and through ICT-based sharing of educational resources. The use and integration of ICT in education within each country provides rational toward cost-efficient improvement of the education quality of the country.

In response to the resolutions, SEAMEO SEAMOLEC is developing ICT systems of Multicast and IPV6 to improve the quality of education under the program called Southeast Asian Ministries of Education Organization Educational Network (SEA EduNet). The SEA EduNet will allow all education community in Southeast Asian countries to collaborate in various innovative ways, including simple reusable learning objects up to a sophisticated collaboration on trans-border education.

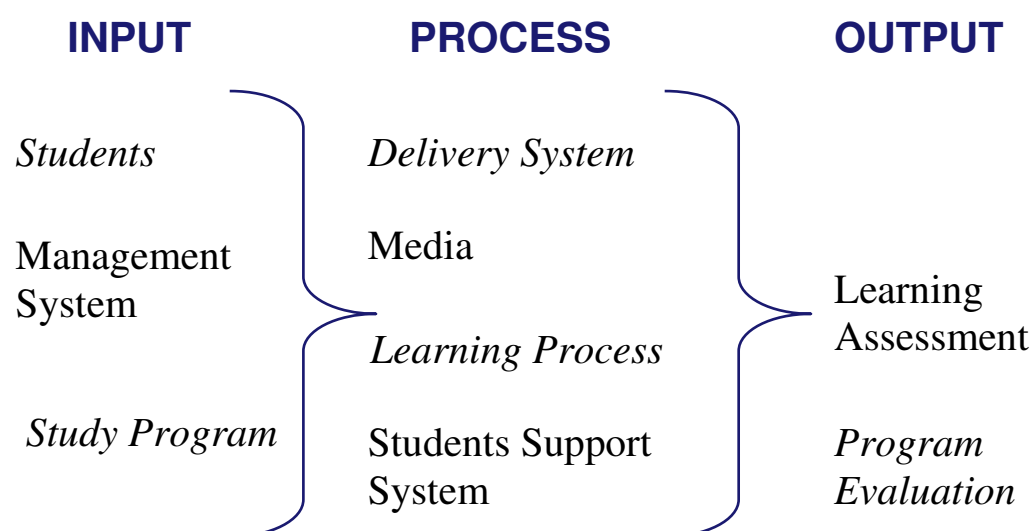
SEAMEO SEAMOLEC, which was established on 1997, is a center for capacity building in ICT-based ODL system, and had already published the "Guideline for Quality Assurance in Open and Distance Learning for Southeast Asian Countries" (2008). Following the publication of the guideline, SEAMEO SEAMOLEC embarks on developing the standards for the practices of ODL system to support the development of SEA EduNet system. The Standard will cover the standards for the institutions, programs, management (including the delivery of the teaching and learning, student support services), infrastructure, learning centers, human resources (faculty and others), the recipients (students and other stakeholders), the output (assessment of student learning, program evaluation and evaluation of the impact of the ODL program).

This paper will discuss the strategy of developing the standards.

Strategy for the Development of SEAMOLEC's ODL Standards

The objective of SEA EduNet as an ODL mechanism is to facilitate educational institutions in implementing ODL in its education system, and to establish standardized procedures for mutual acknowledgement among education institutions carrying out educational discourses through ODL mode. Since SEAMOLEC had already published the book "Guideline for Quality Assurance in Open and Distance Learning for Southeast Asian Countries" (2008), the standardized procedures are developed based on some of the ideas from the books.

On March 2008, the experts invited by SEAMOLEC come up with the aspects and indicators for the Standards as described in Table 1, for institutions that would like to offer ODL programs. Those aspects are based on the components of any education system, which are inputs, process and outputs as described in the Picture 3, and combined with the ideas of the current director of SEAMOLEC, Dr. Ir. Gatot Hari Priowirjanto about the ICT infrastructure and mechanism.



Picture 1: Components of Educational Systems

There are three issues need to be addressed in the implementation of ODL system, which are:

- **Access:** the ODL system has to ensure the provision of quality education anywhere it is needed
- **Equity:** the provision of the quality education is for anyone who needs it without any discrimination because of gender, ethnics or religion.
- **Quality:** the education programs offered by any ODL system should already be assured in term of the accepted standards, so it will be appropriate for anyone, anytime and anywhere

Indicators, which are the characteristics of an ODL system, are:

- The quality of open and distance learning should equal to the quality of face-to-face learning in term of knowledge, skills or attitude developed.
- The consideration of economic of scale or the price for quality
- Consideration for various networking for various activity or self-sufficient
- Sustainability issue (offering program to massive number of students or focused program for specialization purpose/small number of participants)

All of the considerations of establishing an ODL system will be included in the development of the rubric for the indicators in Table 1

Table 1: SEAMOLEC's Indicators of the Standards for ODL System

Aspects	Indicators
Providing institution	
Mission	Stated mission should include the appropriateness of the ODL program to the mission of the providing institution
Institutional commitment	Describe the level of Institutional commitment through the provision of necessary supports (human and non-human)
	Has permit to offer the ODL program or the equal face-to-face program in the country. For Indonesia: the ODL program has the equal of face-to-face

Aspects	Indicators
	<p>program which already had A accreditation by BAN PT</p> <p>The program study offering the ODL program already has ISO 9001:2000 certificate</p>
Program	
Program planning	<p>Quality of program planning: based on need assessment, Development of the program is based on certain instructional development model such as ADDIE for</p> <p>Quality of Educational director</p> <p>Quality of outside experts</p> <p>International cooperation</p> <p>Complete academic plan</p> <p>Active website being maintained regularly</p> <p>Active email address for communication between students and the provider</p>
Curriculum and instruction	
Laboratory works	<p>Quality of curriculum that includes laboratory works</p> <p>Oversight officer for laboratory works</p> <p>Agreement with outside parties</p>
Course materials (print, web-based, audio-visual, Computer assisted simulation etc)	<p>Planning</p> <p>development,</p> <p>try out</p>
Course structure	<p>Course outline</p> <p>Schedules and deadlines</p> <p>Assignments</p> <p>Instructional strategy, consists of face-to-face and online learning (blended learning strategy);</p> <ul style="list-style-type: none"> - Students participate in the residential program for three weeks on campus at the beginning of every semester. The contents of the residential program will cover part of the content in the semester to come - Starting at the second semester students will sit in for exams for the first week before the face-to-face tutorial for the next three weeks. - At the residential program, students will participate in the face tutorials or conducting the practicum. - Students have to do independent online learning at their own place. They read the learning materials and participate in the web-based course tutorial program asynchronous and synchronous through the satellite technology at the learning centers <p>Recentness, description of the renewal plan of the ODL program:</p> <ul style="list-style-type: none"> - For Training Program; every batch of the training activity

Aspects	Indicators
	<ul style="list-style-type: none"> - For D I program, every year - For D II program, every 2 years - D III program, every 3 years - Bachelor Degree Program, every 4 years - Master Program, every 2 years - Ph.D. program, every 3 years
Course delivery	Interaction, will be done in the residential program or through the web course, visiting tutor (twice a semester) or through the lecture delivered through the satellite to the learning centers
	Learning management system
	Interface
	Assistants
Course development team	Student satisfaction
	Learning Design Specialist
	Subject matter specialist
	Media specialist
Evaluation	
Learning evaluation	Kind of tests (multiple choice, projects, performance): <ul style="list-style-type: none"> - For cognitive skills: written test, such as quiz, essay, and multiple choice - For psychomotor skills: practicum, performance tes - For affective skills: Observation list and case study
	Test development procedure
	Test administration procedure: <ul style="list-style-type: none"> - onsite/offline at the campus/learning centers - online at campus or learning centers
	Analysis of the results of the test for revision and improvement of the program
Program evaluation	Student evaluation about: the course/training, interaction process, delivery technique, performance of instructor/tutor/lecturer, learning and administrative supports available,
	Evaluation by other stakeholders, such as: faculty committee, ICT staff, and other supporting staff
Resources	
Human resources	Instructor
	Instructional designers
	ICT specialists
	Assistants
	Tutors
	Technicians
	All of the human resources should fulfill the following

Aspects	Indicators
	requirement <ul style="list-style-type: none"> - Already possesses the necessary knowledge and skills and academic qualification appropriate for the roles in the ODL program offered - Mastery of the ODL skills according to the responsibility in the ODL program obtained in the trainings provided by SEAMOLEC - Mastery of the technology to support the ODL program and can write report and publish any information in one own weblog - Mastery of English for the written and oral communication with TOEFL at least 500 in the TOEFLE score - For the subject matter specialist/trainer/instructor, should possess the necessary certificate to teach at the level of the ODL program - For instructional designers, already possess the certificate or degree as an instructional designer - For IT specialist, should possess the certificate of computer skills, CCNA and JENI - For tutor should possess the minimal degree required to facilitate the tutorial program and other necessary skills - For assistants, should possess the necessary academic qualification appropriate for the ODL program and other certificates such as Computer skills at the level of student, CCNA 2, JENI 2 - For technicians, should possess necessary academic qualification such as certificates of computer skills at the level of student, CCNA 2, and JENI 2
Staff training	Academic (full & part time) (ODL skills, course development, tutorial, guidance and counseling)
	Administrative (full & part time) (administrative skills appropriate for managing ODL program)
ICT infrastructure	Accessibility
	National backbone
	Broadcasting media
	Campus network
	Peripherals
	Multimedia
	Internet
Specific ICT infrastructure according to SEAMOLEC standards	LMS
Connection to SEA EduNeT	1 set of Parabola MESH/Solid 10/12 feet
	1 unit DVB sender & receiver
	1 unit PC router
	1 unit software multicast

Aspects	Indicators
	<p>Local area network equipment to connect all the PC utilized for the ODL program to all the server dedicated for the program</p> <p>1 unit of web server as the storage of all the learning and other materials for the ODL program which will be sent using the multicast technology with the following specification:</p> <ul style="list-style-type: none"> - Processor equal to Pentium 4 - 1 GB memory - 250 GB STA hard disc <p>Minimum of 20 Computers in the computer lab with the following specification:</p> <ul style="list-style-type: none"> - Processor equal to Intel Celeron - 256 MB of Memory - 80 GB of hard disc <p>LCD Projector & Projector screen</p> <p>Wireless LAN connected to the internet connection</p> <p>Video teleconference equipment (minimum with web cam or handy cam connected to PC), with the following specification of the PC:</p> <ul style="list-style-type: none"> - Processor Core 2 Duo - 1 GB of Memory - 80 GB of hard disc <p>Legal software are installed in all of the PC utilized by the ODL system; such as:</p> <ul style="list-style-type: none"> - Software and the application for the server - Software for the client - Software for the office application - Other software appropriate for the ODL program offered
Other resources	<p>Support for instructors</p> <p>Legal support</p>
Infrastructure	<p>Rooms for class interaction</p> <p>Computer/multimedia lab</p> <p>Dedicated internet connection 128 kbps (broadband minimum)</p>
Management of the Program	
Learning support	<p>Registration, can be conducted at the ODL provider or the SEAMOLEC Mitra (500 & 7000)</p> <p>Admission</p> <p>Advisory</p> <p>Financial aid</p> <p>Digital library</p> <p>Material ordering</p> <p>Technical support</p> <p>Pre program/other orientation, the students are required to take course offered by SEAMOLEC to prepare them to do independent learning utilizing the ICT; The course consist of the following topics: introduction to ODL system, Independent learning skills development, learning skills, computer/ICT skills</p>

Aspects	Indicators
	Test administration
	Grading
	Graduation
	Exit interview
Recipients	
Prospective students	Assessment of student characteristics
	Assessment of student academic performance
Student's commitment	Student personal commitment
Sustainability	
Tracer study	Tracer survey
	Program revision and maintenance

The Indicators of the SEAMOLEC's Standard for the Providers of ODL Programs are developed based on the Chapter 5 of the Guidelines for Quality Assurance in Open and Distance Learning for Southeast Asian Countries (SEAMOLEC: 2008, pp. 81 – 83)

Implementation of The Standards

In 2008 SEAMOLEC exercise part of the standards while facilitating 26 institutions in Indonesia, which would like to establish the distance education program for in-service primary teachers to upgrade them to the bachelor degree. To ensure that the institutions could fulfill the standards, SEAMOLEC develops a set of training programs for the institutions leaders, the faculty and the technicians. The training programs are developed based on the strategy of the previous director of SEAMOLEC, Prof. Dr. Paulina Pannen, when developing consortium of Hybrid Learning for Indonesia Elementary Teacher (HYLITE) program, an ODL program for elementary teacher in 2006. The trainings covered topics such as principles, requirements and management of ODL, and skills to develop ODL learning materials in various forms (print, audio, video, and web-based). The topics of the training are important issues in ICT-based ODL based on the works of Badrul Khan (2005), Belawati & Zuhairi (2007), Freeman (2004), Meyer (2002), and Moore & Kearsley (2005).

Thus far, SEAMOLEC has facilitated two consortium of higher education in Indonesia offering programs via ODL mode, i.e., Hybrid learning for Indonesian Teacher (HYLITE) (2006), and Hybrid Learning for Computer and Engineering Technician (HYFORCE) in 2008. Furthermore, SEAMOLEC also facilitates the establishment of Multi Campus Program in Digital Media and Game Technology (Masters Degree program in Digital Media and Game Technology), and Hybrid learning for trainers of Teachers Development Centers in Indonesia in 2008.

The indicators in Table 1 have been endorsed by the Governing Board Members of SEAMOLEC in the meeting in August 2008. The members suggested that SEAMOLEC should develop the detailed standards in a way that can help any institutions to apply it gradually.

Next Step

SEAMOLEC plan to develop a detail instrument with the rubric for each of the indicators in Table 1. The Instrument should help any institutions to evaluate their readiness in term, of management, infrastructures and skills to offer ODL program or to self-evaluate the quality of ODL program they offered. The detail draft of the SEAMOLEC standard will be available by August 2009. in developing the instrument SEAMOLEC will cooperate with other SEAMEO centers such RIHED and Innotech.

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