Survey Research on e-Learning

in Asian Countries - Fiscal Year 2002

(Country Specific Report - Republic of the Philippines)

- Table of Contents -

1. Market: Market Trends of e-Learning

1.1 Status of IT Promotion (Centered on the Internet)

1.1.1 Outline of the Internet

The Internet became available to the public in the mid-1990s. Currently, more than several dozen ISPs are said to exist in the Philippines. Along with dial-up connection, they provide services such as broadband and cellular phone connection. However, there are many restrictions, such as the low penetration rate of telephones, limited area for Internet connection, and the high price of broadband services.

Only a limited number of people use the Internet. According to the statistics of ITU (2001), the number of the Internet users in the Philippines is approximately 2 million, a low user penetration rate of about 2.56%. However, a steady increase in users is observed when this number is compared to the number (about 1,090,000) reported in the 1999 ITU survey.

1.1.2 Outline of ISP

Approval from NTC is required to start an ISP business in the Philippines. Five-year approval is given after paying an application fee of 100 pesos and an annual registration fee of 6,000 pesos.

Although there are several views on the number of ISPs in the Philippines, approximately 51 ISPs engage in the actual business.

1.2 Status of Education and Training System

1.2.1 Higher Education

The education system in the Philippines is, in principle, six years for primary, four years for secondary, and four years for higher education. The usually four-year term in university can be eight years for medical and law school, depending on the faculties.

The Commission on Higher Education (CHED), which was established by "Republic Act No. 7722 (the Higher Education Act of 1994)" in 1994, is the center of policies regarding higher education institutions (public and private higher educational institutions and institutions for post-secondary education which offer courses to acquire degrees) in the Philippines. The establishment of CHED is part of educational reform led by the Congressional Commission on Education (EDCOM). In addition to CHED, the Department of Education (DepEd), which determines general educational policies, and the Technical Education and Skills Development Authority (TESDA), which controls the secondary level of technical and vocational training have promoted reform.

The center of higher education reform currently conducted by CHED is the mid-term "Higher Education Development Fund" plan. This plan is the essential feature of the educational policies with a target of creating necessary human resources for globalization and knowledge-based economy between 2001 and 2004.

According to the announcement by CHED, in 2001 there were 1,428 higher educational institutions in total, of which 170 were public, and 1,258 were private. Also, there were 2,640,000 students, out of which 710,000 were in public institutions, and 1,930,000 were in private institutions. Popular major fields were: Business Administration/Commercial Science (31%), Education (18%), Engineering (13%), Math and Computer (8%), and Medicine (7%).

In 1996, CHED started a program for improvement of computer-related infrastructure at national and private universities. During the first stage, they spent 251 million pesos for improving the infrastructures of 973 universities by January 1998. In the second stage, they spent 15 million pesos, and the third stage plan was aborted due to financial deficit of the government. Financially fit private universities arrange Internet facilities by making direct contracts with ISPs, and as a recent trend, there is a move to prepare Internet cafes within their campuses by affiliating with ISPs.

In addition, most of the universities have been integrated into part of a network by "the Philippine Network Foundation Project", led by Department of Science and Technology (DOST). Furthermore, they also have been integrated into a network for research and educational institutions by the "Philippine Research, Education, and Government Information Network (PREGINET)".

1.2.2 Vocational Education

TESDA exercises jurisdiction over vocational and technical education institutions in the Philippines.

TESDA was established by "Republic Act No.7796 (Technical Education and Skills Development Act of 1994)". The predecessors of TESDA were three institutions: the National Manpower and Youth Council (NMYC) of the Department of Labor and Employment (DOLE), the Bureau of Technical and Vocational Education (BTVE) of DepEd, and the Bureau of Local Employment (BLE) of DOLE. It is said that with the establishment of TESDA, duplicated policies regarding technology development and human resource development were integrated, and the direction of vocational education and training policies in the Philippines was established. TESDA bears a responsibility to enhance vocational education for the secondary level in line with the National Technical Education and Skills Development Plan (NTESDP).

1.3 IT Human Resources Required

1.3.1 Outline of IT Human Resources

There were approximately 30,000 IT workers within the Philippines in 1993, but it is said that the number of workers has increased by 30,000 each year. The majority are engineers related to software development, and many of them have made inroads into overseas areas, not to mention the Philippines. The Philippines has become a supplier of IT engineers mainly related to the software. Software engineers are in short supply worldwide, and the need for IT engineers in the Philippines has increased at a rate of 26.2% annually. In 2000, approximately 100,000 Filipino engineers looking for high income were employed overseas.

Also, the demand for IT engineers within the Philippines has increased at an annual rate of 15% and the shortage of IT engineers is approximately 350,000, according to ITU's estimate. On the other hand, the level of required IT technique has changed, and fostering of expert engineers who can engage in high-level software development is an urgent need. According to the recommendation by NIIT Philippines, from now on, IT engineers in the Philippines will be required to make full use of cutting edge technology, and in order to meet such demand, improvement of the quality of educational institutions is essential.

The Arroyo administration tries to reform the industrial structure by fostering venture companies by means of nurturing many IT engineers.

1.3.2 Outline of IT Human Resource Education

Sales subsidiaries of computer companies took charge of IT human resource education from the 1960s to 1970s. After that, Electronic Data Processing (EDP) vocational colleges were established in the mid-1970s. In the 1980s, universities started programs with the objective of acquiring IT technology related degrees.

Currently, approximately 200 institutions provide short-term training courses within the Philippines and about 30 universities offer IT technology related degree courses. The number of students who belong to IT related courses at universities has rapidly increased; there were about 200,000 students during the term of 1998-99, however, the number has increased to about 300,000 students during the term of 2000-01. To that end, CHED has a plan to revise the standard for the quality of IT technology related courses, and plans to implement this during the term of 2002-03.

Various attempts at IT human resource education have been made both by public and private sectors. The "National Technical Education and Skills Development Plan (NTESDP) 2000-2004", which is a plan from 2000-04, is one significant example.

The Department of Science and Technology and Information Technology Foundation have a plan for "a Virtual Center for Technology Innovation in IT" to foster 10,000 IT experts within five years.

Also, there are the following examples in the private level:

IBM has tied up with universities in the Philippines since 1991, providing training programs for IT engineers.

Cisco established the first network academy in the Philippines in 1998, and its number has increased to 56. The academies are located mainly within vocational high schools and universities, providing training programs regarding network and the Internet technology. Furthermore, Cisco has established the "Ayala Foundation project", operating a business to have youths who do not go to school attend the network academy.

1.4 E-Learning Market Trends

1.4.1 Outline of e-Learning Industry

e-Learning industry in the Philippines is one of the major sectors in IT industries that has started to show growth for the past five years. Currently, due to its short history and insufficient infrastructure construction, it is still at the "groundbreaking" stage. Some believe, however, that it has a potential to develop into a large industry in the future.

The majority of e-learning vendors that operate in the Philippines are vendors with foreign capital.

Cases of implementation in companies are rare, and the activities are conducted mainly by several major universities. Few vendors are found, except foreign companies from Europe and the United States.

1.4.2 Market Size of e-Learning

Information unavailable.

2. Technology: Trends of e-Learning System (Synchronous & Asynchronous)

2.1 University of the Philippines, Open University (UPOU)

http://www.upou.org/

2.1.1 Outline

The University of Philippines (UP) is a leading university in the Philippines, established in 1908. Originally, there were only two colleges, that is Padre Faura and Los Banos, however, currently it has eight constituent universities that are granted autonomies under the UP system.

UPOU is the first university open to the public, established in 1995 as the fifth university of UP, and taking undergraduate courses was made possible in 1997. Programs provided by UPOU are considered to be well-developed distant learning programs in the Philippines.

The most popular programs taken by students are master's programs in the department of education for teachers, and public management master's programs taken mainly by administration officials.

Each program mainly uses paper as a medium, and audiocassette tapes and CD-ROMs are used according to the need. In addition to tutorials at about 30 learning centers in the Philippines, students receive support using telephone and e-mail.

Furthermore, WBT was implemented in November 2000, by using OPEN IVLE, a free version of "IVLE (Integrated Virtual Learning Environment)", which is a learning management system developed by the National University of Singapore (NUS) in Singapore.

2.1.2 E-Learning Related Activities

From August 2000, UPOU started to deliver lectures on the Internet by using OPEN IVLE. "IVLE" is an online course management system developed by NUS in Singapore. It uses Internet Information Server and Microsoft SQL Server 2000 and is highly in versatile. Version 3.0 and 4.0 of the "IVLE" has been released as free "OPEN IVLE".

Version 4.0 is used for UPOU, and it has most of the functions necessary to deliver courses online. It also has functions such as delivering course information and schedules, discussion boards and quizzes, and an environment with tutorial and security for information sharing, and monitoring usage.

After one year of implementation, 13 courses were conducted by WBT. Two of these courses were complete online lectures without classroom lectures. UPOU is expanding the usage of "IVLE" with a goal of ultimately delivering all lectures online.

2.2 De La Salle University (DLSU)

http://www.dlsu.edu.ph/

2.2.1 Overview

DLSU is a Catholic university founded in 1911. While national universities are suffering from a shortage of funds, it is a well-funded private university, and has developed into a top university within the Philippines. It has been affiliated with other prominent universities located in the metropolitan area of Manila, such as UP, and provides exchange programs of students and classes. The total number of the students is approximately 20,000 with six colleges for undergraduates, and six colleges for graduate level.

The Information Technology Center (ITC) is an institution that plays a central role in IT usage.

2.2.2 E-Learning Related Activities

(1) "mba.online"

This is an online MBA course of DLSU's Graduate School of Business (GSB). There are two modes of courses; one is mixed with classroom lectures, the other is providing most of the classes online. The LMS used in this course is WebCT.

(2) "Internet-enhanced Master of Arts in Teaching Literature Program (InterMATL)"

"InterMATL" is a distinctive program related to e-learning. This is a joint project of DLSU and CHED, funded by CHED, with the purpose of having teachers at higher education institutions located outside the metropolitan area acquire the necessary knowledge, skills, and degrees for teaching in general education courses and a literature department. Courses are provided by combining tools on the Internet and conventional classroom facilities. The degree acquired through "InterMATL" is accredited by the Department of Literature of DLSU Manila.

In addition, the following IT related systems have been developed.

(1) "My.LaSalle"

http://www.dlsu.edu.ph/mylasalle/

"My.LaSalle" is a system used to manage lecture information and personal information of each student. Students can access such information by logging in the system using their own IDs and passwords.

(2) "Wireless Information Services (WISe)"

http://wise.dlsu.edu.ph/overview.asp

"WISe" is a wireless information delivery and reception system developed by ITC. By using cellular phones' Short Messaging System (SMS), Wireless Application Protocol (WAP) and Personal Digital Assistants (PDA), it deliver news from the university to students, instructors and staff members. The service started in September 2000 with SMS, and the use of PDAs became available from January 2001.

DLSU positions usage of "WISe" as the third generation of information service following the Internet and intranet, and plans to use it widely for delivery of university news, course registration, etc.

2.3 International Rice Research Institute (IRRI)

http://www.irri.org/

2.3.1 Overview

IRRI was established by the Rockefeller Foundations and the Filipino government in 1960. It started research activities in 1962 and has been a non-profit agricultural and engineering training center.

2.3.2 E-Learning Related Activities

(1) "Rice Knowledge Bank"

http://www.knowledgebank.irri.org/

"Rice Knowledge Bank" within IRRI is the world’s first integrated digital library specializing in producing rice. It supports providing information to national governments, non-profit organizations and farmers through digitalized information on rice production. In the Bank, information on past studies on rice plants are digitalized, classified into five categories, such as "Knowledge Bytes", "e-learning", "reference guide", "support tool for decision-making" and "biology database/geographic information system", and the

information is available for browsing.

Under the item of "e-learning", courses called "Rice Grain Quality" regarding basic knowledge of e-learning and quality of grain have been prepared.

In the former course, in addition to the basic knowledge of e-learning, a glossary used for learning and a discussion forum that can be logged into only by registrants have been prepared.

In the latter course, important reminders and techniques for each stage of producing high quality rice can be learned, and also a discussion forum has been prepared.

2.4 Science and Technology Advisory Council (STAC) - Japan

http://www.stacj.org/

2.4.1 Overview

STAC-Japan is an organization established in Tokyo in December 1995. It consists of students, experts and other Filipinos living in Japan, and develops activities that aim at national prosperity through the development of science and technology.

2.4.2 E-Learning Related Activities

(1) "Pilot Distance Education Project (PDEP)"

The objective of "PDEP" is to provide education and vocational training to the Filipinos who live overseas (Japan). The program provides course modules by using distance education technology. In addition to modules that can be downloaded or on paper media, it uses video-on-demand, a videoconference system, etc.

(2) "Application of Internet-based Videoconferencing Technology for Remote Project Management and Monitoring"

In this project, members of STAC in Tokyo make presentations of research findings to the audience in the Philippines. "PDEP" mentioned earlier is the center of this project.

(3) "EDUCONFAB 2002"

http://www.stacj.org/news/educonfab2002.htm

"EDUCONFAB2002" was an online conference hosted by STAC-Japan in September 2002, with the theme of the current status of science and technology education in the Philippines. It was held by connecting Tokyo University in Japan and UP Diliman by a videoconference system.

The purpose of the conference was "Empowering the Philippines through Science and Technology Education: Responding to the Challenges of the Globalization". Experts in the Filipino governmental institutions made presentations on the current status and future prospects for science and technology in the Philippines, through the videoconference system. A little over 30 students participated in Japan, and 40 participated in the Philippines.

3. Advanced Activities

3.1 Next Generation Learning Infrastructure such as Collaborative Learning

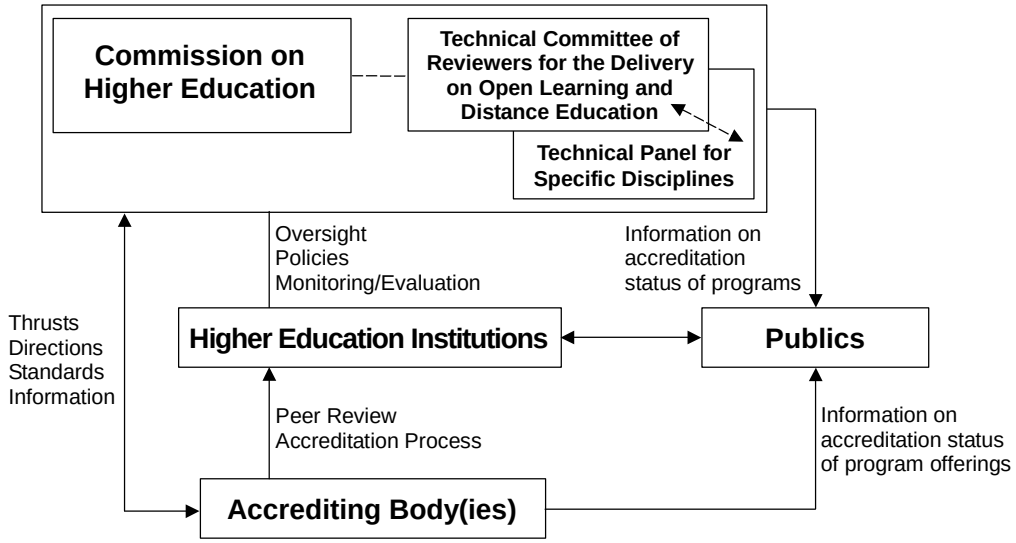
Information unavailable.

3.2 Quality Standard

The Technical Committee of Reviewers for the Delivery on Open Learning and Distance Education of CHED plays a central role in promoting enhancement of quality for e-learning contents in the Philippines.

"Updated Policies and Guidelines on Open Learning and Distance Education", which was announced by CHED, requires preparation of "fully-described, structured and developed material" regarding development and delivery of e-learning courses, and points out the necessity to construct the instructional design by experts who have appropriate degrees.

In addition, CHED has established "quality assurance framework", which assures quality as follows:



Source: Maria Cristina D. Padolina (2002.7), Presentation material for "AEN Conference 2002"

Figure 3-1 Quality Assurance Framework

Under this framework, learner-oriented way, instruction design, quality, continuous improvement, public responsibility and accountability, etc., are emphasized. Furthermore, to improve overall quality enhancement for e-learning courses, CHED has a plan to establish a consortium with an objective to strengthen tie-ups between related education and research institutions.

4. Government Policy and its Vision (Mid- and Long-term Direction)

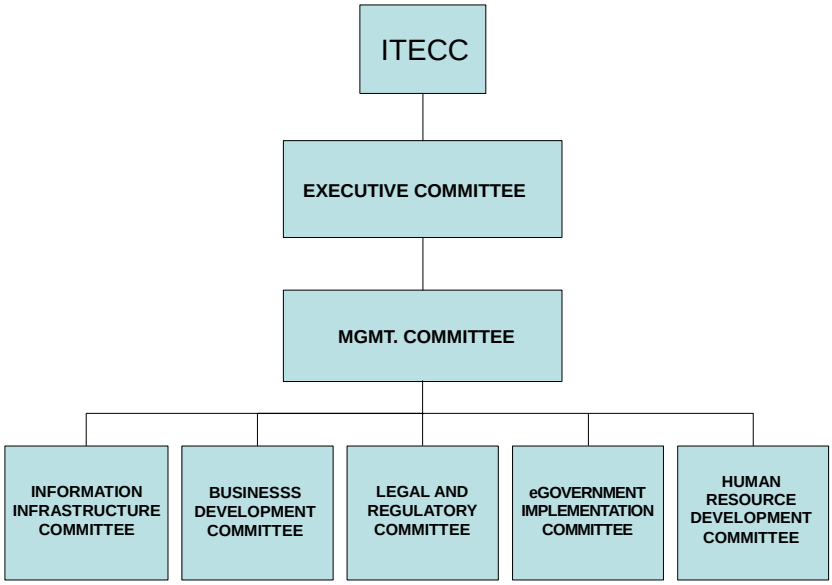
4.1 Status of IT Policies

4.1.1 Overview

In the 1990s, the government made many policies to promote growth of the IT industry in the Philippines. The policies include deregulations on foreign exchange in order to reduce trade barriers and increase investment from overseas.

The key to promotion of IT policies in the Philippines is the Information Technology and E-Commerce Council (ITECC).

ITECC is the highest ICT policy making body in the Philippines, established by "Executive Order 18" in 2001. The organizational chart is as follows:



Source: Maria Cristina D. Padolina (2002.7), Presentation material for "AEN Conference 2002"

Figure 4-1 Organizational Chart for ITECC

The objective of the activity of ITECC is to develop the Philippines as hub for e-service in Asia. In order to carry this out, various committees have been established to form necessary regulations, e-government structure, information infrastructure development, and human resource development.

4.1.2 Policies and its Details

(1) "National Information Technology Plan for the 21st Century (IT21) "

"IT21" is an ICT policy introduced in October 1997. During the initial introduction, the National Information Technology Council (NITC), which had been established in 1994, was the institution in charge. It was afterward passed on to ITECC.

As a 10-year plan from 1998, then-president Ramos established the plan. It is divided into the following three phases:

(a) Phase 1
- Vision: By 2000, construct IT infrastructure that can be accessed from industries, governmental institutions, schools and homes in the Philippines
- Action Agenda: Improve ICT related legal system, improve infrastructure, develop ICT human resources, implement various measures for developing ICT related industries, organize activities to carry out structural reform, and publicize and advertise "IT21"

(b) Phase 2
- Vision: Permeate IT usage into daily life by 2005, and enable Filipino corporations to provide competitive IT products on the global market
- Action Agenda: Promote usage of ICT in every industry, develop ICT products and services, permeate ICT usage in the public field, secure the global standard in ICT education and training, maintain high growth of electronic communication sector

(c) Phase 3
- Vision: Become a knowledge center in Asia by 2010
- Action Agenda: Maintain innovation to create and diffuse ICT knowledge, maintain the high growth of ICT industry, maintain the role of the Philippines as the knowledge center in Asia, promote successful examples of human resource development by using ICT, and realize universal access in telecommunication

4.2 E-Learning Related Measures as Part of IT or Educational Policies

4.2.1 Overview

The Philippine recognizes e-learning as an essential tool for promoting migration to a knowledge-based society. For its development and diffusion, it has worked on establishing related legislation as a priority issue. Therefore, it has established ITECC with cooperation of both public and private entities, promoting establishment and promotion of IT policies.

The Human Resource Development (HRD) Committee of ITECC is in charge of education policies.

4.2.2 Policies and its Details

As part of promoting IT introduction, they have following activities:

(1) "Philippine Research, Education and Government Information Network (PREGINET)"
http://preginet.asti.dost.gov.ph/

On the initiative of Advanced Science and Technology Institute, the project of "PREGINET" started as a national broadband research and training network, sponsored by the Department of Science and Technology. The Philippine government aims for development and improvement of the science and technology infrastructure related to distance education, telemedicine, bioinformatics, agriculture, and also aims to develop next-generation network technology by connecting various education and research institutes with "PREGINET".

By using this network, joint research and development with partners can be possible, and it can be used as platform for conducting various network experiments.

(2) "SchoolNet"
http://www.pilipinasschoolnet.org/

"SchoolNet" is a network project for secondary schools planned by FIT-ED and the Ayala Foundation. 20 schools are connected, and nine governmental institutions and private companies and universities are partners for FIT-ED. The objectives for the project are improving IT related technology by giving opportunities to experience computers to students, resolving digital divide etc.

In order to implement the projects, various partner corporations support it both financially and technologically. Since 2001, a plan called "ed.venture" has been operated by suggestion of the Coca Cola Export Corporation. This plan is to provide computers and Internet access facilities, teach computer usage, and provide continuous support. First of all, in 2002, it started with 15 high schools, with plans to implement it in a total of 50 high schools by 2004. In the schools that participate in the plan, Coca Cola ed.venture Center will be provided with the cooperation from Parent-Teacher-Community Association, local authorities, and rural community organizations. This makes acquiring knowledge for computer usage possible. Also, for the first year, Islacom provides free telephone and ISP services, and after that, it will provide such services at lower prices.

In addition, technical support is provided to schools that participate (or wish to participate) in the program.

4.2.3 E-Learning Related Organization

The following are e-learning related organizations in the Philippines:

(1) ITECC-HRD eLearning Subcommittee

Under HRD committee, which is one of the committees of ITECC, "eLearning Subcommittee" has been established. Members of the committee are the government agencies such as CHED, universities such as DLSU, and IT corporations.

The members of the committees played a central role in holding "The 1st National Conference on eLearning".

4.3 Laws Regulating Rights for Intellectual Property and Personal Information in e-Learning

In the Philippines, transaction of intellectual property is restricted by "Intellectual Property Code of the Philippines (Republic Act 8293) ". As for e-learning, it is related to property rights of the contents for course materials.

The government has announced a policy to strengthen protection for e-learning system and services. In "E-Commerce Act of 2000", which was implemented in 2000, the government aims to protect data and information and secure legal effectiveness for electric transaction of them. Currently, the Filipino government is considering establishing an institution that leads policies related to these areas, and is planning to develop standards for securing safety of e-commerce.

4.4 Vision

Information unavailable.

4.5 International and National Conference

The following conference was held:

(1) "The 1st National Conference on eLearning"

- Period: August 1 and 2, 2002

The second conference is planned to be held in August 2003.