# Survey Research on e-Learning

# in Asian Countries - Fiscal Year 2002

## (Country Specific Report - Indonesia)

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# 1. Market: Market Trends of e-Learning

## 1.1 Status of IT Promotion (Centered on the Internet)

### 1.1.1 Outline of the Internet

Development of industries for IT and multimedia in Indonesia lags behind other Asian countries. Although Internet connections have been made available primarily to researchers since the late 1980s, commercial networks are limited to locations in metropolitan areas such as Jakarta, and do not sufficiently cover the numerous islands scattered over its vast territory. The penetration ratio of dedicated lines falls behind, being a little less than 3%.

According to the statistics of ITU (2001), the number of Internet users in Indonesia is approximately 4 million while user penetration ratio is 1.91%. In comparison to the number of Internet users that was approximately 900,000 in the ITU survey in 1999, Internet users have increased.

Meanwhile, as a means for those who do not own telephone lines or personal computers to use the Internet, pay facilities called "Warnets (warn means hut)" for public Internet users (Internet cafe) are increasing in number primarily in urban areas and attracting more and more users, mainly students and youths.

### 1.1.2 Outline of ISP

Internet connection service was defined as non-basic service, and started from 1994 under the existing laws for telecommunications. The first ISP providing commercial services was IndoInternet. It was followed by three companies including PT. Sistelindo Mitralintas (IBM Global Network), PT. Rahajasa Media Internet (RADNET), and PT. Aplikanusa Lintasarta (IdOLA), which started business in 1995. According to the statistics of ITU (2001), 60 ISPs are currently providing services.

Wasantara.Net, which owns the most extensive network, is a networking service provided by a subsidiary company of PT Pos Indonesia (Indonesian Post Office) that allows its subscribers to connect to the Internet also from personal computers installed in post offices. Furthermore, PT. Telkom, a monopolistic enterprise for domestic long-distance telephone service, also provides nation-wide Internet services, while a new high speed Internet service (TurboNet) using a satellite system has also started.

## 1.2 Status of Education and Training System

### 1.2.1 Higher Education

Higher education institutions in Indonesia are composed of five categories; universitas (universities), institut (specialized colleges), sekolah tinggi (colleges), politeknik (polytechnics), and akademi (academies). The institutions that can approve bachelor's, master's and doctoral degrees (referred to as S1, S2, and S3 respectively) are the former three institutions, and a minimum attendance period is set to four years. On the other hand, polytechnics and academies are specialized educational institutions for specific technologies or arts, offering one- to four-year courses to approve diplomas referred to as D1-D4 depending on years attended by each graduate. Many colleges also provide diploma courses in addition to S1-S3 courses.

There are 2,054 higher education institutions as of the end of 2001, including colleges composed of 363 universities (41 national universities under the Ministry of National Education and 322 private universities), 62 specialized colleges (5 national specialized colleges under the Ministry of National Education, 14 specialized colleges under the Ministry of Religious Affairs, and 43 private specialized colleges), 961 colleges (5 colleges under the Ministry of National Education, 33 colleges under the Ministry of Religious Affairs, and 923 private colleges), 72 polytechnics (25 polytechnics under Ministry of National Education and 47 private polytechnics), and 596 academies (all private). Thus, 70% of all institutions are universities and colleges.

The number of attendees in the same year was 20,700,000 for all higher education institutions, including 970,000 in institutions under the Ministry of National Education, 275,000 in institutions under the Ministry of Religious Affairs, and 19,000,000 in private institutions, indicating that the number of attendees of private higher education institutions is dominantly large. Some private institutions are of small scale and are founded on instable budgets, so that they cannot offer higher education services of satisfactory quality. In the field of IT education, however, there are particular universities, such as the highly evaluated Bina Nusantara University, which implement the most advanced devices and from which thousands of students graduate every year.

The State Policy Guidelines (GBHN) are determined by the People's Consultative Assembly every five years, to indicate basic guidelines for national policy. The latest version is for 1999-2004, in which the following seven points are emphasized regarding educational fields:

- The educational budget will be substantially increased to make more opportunities available for all people to attend high quality education equally.
- The quality of teachers will be improved through improvements of educational skills or welfare.
- Reorganization of the education system will be promoted, including improved curricula, which would satisfy a variety of needs specific to different regions.
- Educational organizations will be reinforced (including the improvement of facilities) to teach morals or regulations as well as to improve people's capability, while participation of regional personnel or parents are encouraged.
- The educational system will be improved and stabilized based on principles of decentralization of authority or self-governing operation.
- The quality of educational institutions will be improved in order to construct an education system efficient enough to catch up with the development of science and technologies.
- The quality of human resources will be promptly improved through various kinds of well-balanced efforts, so that the younger generation may excavate their potential ability in an appropriate manner under the protection and support of the nation.


## 1.2.2 Vocational Education

The plan has been basically defined based on a bottom-up method. A vocational training center (Balai Latihan Kerja: BLK), which is subsidiary to Ministry of Manpower and Transmigration, contacts each branch office in each region to recommend activities for human resource training and improvement of productivity, and then the recommendation is submitted to a central office (general office for training and improvement of productivity) for discussions of the Central Planning Agency (BAPPENAS) and the Ministry of Finance. After the discussions, if the proposed program is approved, it will be authorized as an activity and published as a project document.

The project document is distributed to project operation sites within organization units of regional offices, and then enforced within the current fiscal year.

According to a survey conducted by JICA in 2001, current problems of vocational training are as follows:

- Most of the training offered by the government and civil vocational training institutions does not fully satisfy needs of industry.
- When offering training, collaboration between vocational training organizations and specific fields is unsatisfactory, whether they are public or civil, resulting in inefficient vocational training.
- Industries and entrepreneurs do not thoroughly understand that vocational training produces skill and technology that will be valuable in the future.
- The financial industry is not at all ready to support vocational training. Consequently, vocational training is not considered as business for investment.
- Comprehensive laws or regulations concerning vocational training are not yet complete.

### 1.3  IT Human Resources Required

#### 1.3.1  Outline of IT Human Resources

In specific IT fields of leading organizations or foreign firms, supply and demand of network or security engineers is an issue to be handled with great urgency. Among other local enterprises, the level of IT implementation is still low, and many of them have not yet started implementing IT technologies. There are very few human resources capable of project management or proposing any solutions for issues regarding networks, for example.

The human resources required for database or programming are relatively sufficient.

#### 1.3.2  Outline of IT Human Resource Education

The Office of Minister of State for Communications and Information, which was inaugurated in August 2001, has not revealed any specific policies, even though education of human resources is defined as one of its responsibilities. This indicates fact that no part of government is committed to systematic IT human resource education.

IT industry promotion policies enforced by the Ministry of Industry and Trade include the following four issues, in which the issue of education of human resources is also given consideration. However, most projects are in fact still in planning stages, or at a stage where a pilot project has just begun, with scarce results generated.

IT industry promotion policies enforced by the Ministry of Industry and Trade are as follows:

(1) Activation of software market in rural areas

There are 200 local software firms in Indonesia, 80% of which are located in Jakarta and Bandung, with the remaining 20% in Semarang, Surabaya, and other areas.

(2) Authorization of IT human resources

According to the Decree of the President Number 18 Year 2000, any business organizations have to first obtain a national certificate before applying for a government grant. However, the national certificate has not yet been finalized, and is now under consideration for implementation. Thus, standardization is in progress and is being addressed primarily by the Ministry of Industry and Trade, in cooperation with the Ministry of Manpower and Transmigration, the Office of Minister of State for Communications and Information, IPKIN (IT engineers' entity), the Ministry of National Education, and universities (Gunadarma, Budi Luhur, Bina Nusantara, and others).

(3) Promotion of software industry

An incubator business center will be established in cooperation with universities. Students who have graduated from universities are offered programs on how to run a business in software industry. A pilot project is now in progress with the help of Gunadarma University.

(4) Regional IT Center of Excellence (RICE) project

RICE project (to establish a software park) is being addressed in a tie-up with ASPILUKI, an industrial association of the software industry, with the first establishment being opened in Bandung.

"RICE project" will establish centers in various districts to support those who want to start an IT business. Internet connection points are offered at low prices, and advice is also given regarding laws and business management. IT education is to be offered in the future.

The fifth project to implement a national certificate for IT human resources is under consideration, but discussions have just begun with organizations concerned.

### 1.4  E-Learning Market Trends

Information unavailable.

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

### 2.1 The Indonesian Open Learning University

http://www.ut.ac.id/inggris/home.htm

#### 2.1.1 Overview

This university was established as the 45th national university in 1984 especially for the purpose of providing education for students in rural areas, providing lifelong education for adults and providing teachers of elementary and secondary schools with training. This is the only university providing distance education in Indonesia. It opens 32 local centers across the nation, in which 353,000 students in total have studied, and from which approximately 63,000 have graduated. The Ministry of National Education has not yet approved any other universities to provide distance education.

#### 2.1.2 Activities Related to e-Learning

(1) Courses

15 faculties shown below offer 49 programs in total, including courses for bachelor's degree (S1), diplomas (D1-4), and AKTA IV (Teaching Certificate).

Table 2-1 Overview of Provided Courses

| Math & sciences | Mathematics, statistics, biology |
|---|---|
| Economics | Developmental economics, management, international trade, finance and banking, finance management, human resource management, marketing management, etc. |
| Social sciences | Administrative science, communication, sociology, literature |
| Training for teachers of primary and secondary schools | Educational studies, languages (Indonesian and English), education (mathematics, chemistry, physics, biology, social science, civics, sports and health) |

(2) Delivery method

Materials mainly consist of printed textbooks and lectures are offered through television and audio (radio, cassette tape, and video). Tutorials are accessible online over the Internet.

### 2.2 Petra Christian University

http://www.petra.ac.id/

#### 2.2.1 Overview

This is a university established with aid from Protestant churches in 1961, and approximately 10,000 students are registered at present. Although it was originally started to offer only English courses, 15 courses from six faculties are currently providing programs.

#### 2.2.2 Activities Related to e-Learning

There is no course offered entirely through e-learning, and each course uses it for supplementary purpose, by providing a part of the lecture online. Students can attend lectures online at their convenience.

2.3   Indonesian Distance Learning Network (IDLN)

http://www.idln.or.id/

### 2.3.1   Overview

IDLN is an organization belonging to Pustekkom (Center for Information and Communication Technology for Education) affiliated with the Ministry of National Education, and its aim is to diffuse distance education as well as to educate human resources for educational institutions through distance education. It was established in 1993 with funds raised by the Indonesian government and UNDP.

### 2.3.2   Activities Related to e-Learning

(1) Management of Southeast Asian region of "Global Distance EducationNet" of World Bank
"Global Distance EducationNet" is a project aiming to provide information to those who provide distance education to develop human resources. IDLN collects information on distance education globally, and is ready to provide important findings over the Internet.

(2) Others
Its activities include collection of information on distance education and offering of information for its promotion.

2.4   Ministry of Home Affairs (MHA)

http://www.depdagri.go.id/

### 2.4.1   Overview

This is a governmental office that directly controls local autonomies, with a staff of about 6,000. In compliance with the advancing decentralization of authority, 2,000 of the staff have been allocated to regional offices to improve the level of local autonomy. It has also established an information center to activate transparent local administration on the basis of information on population fluctuation, education, medical practice, and local district development, which is helpful to energize local areas, or on the basis of accurate and real-time common data on finance and others.

### 2.4.2   Activities Related to e-Learning

Indonesia legislated the decentralization of authority in 2000 in order to democratize the nation and to develop provincial regions. Accordingly, 25% of the national budget (60 trillion rupiah, 1 rupiah = approximately 0.015 yen) has been allocated to provincial areas since 2001. It also authorized local governments to control reconstruction of organizations, resulting in higher authority acquired by provincial autonomies, although reports for project plans and their results were made mandatory.

Under these circumstances, a project to construct an information network is under way to enable prompt transmission of information, guidance/consulting, and reports between the central government and 373 provincial autonomies, and also allow them to share information necessary for provincial administration. This project is expected to ultimately play a role of an infrastructure for implementation of electronic government.

To develop human resources who can utilize the information system, it is necessary to train staffs of MHA or provincial autonomies. However, the number of trainees is as many as 2,650,000 in the entire territory of Indonesia. In order to enforce training for such a large number of human resources in short period of time and at low cost, e-learning using satellite communication is under consideration. First of all, training for 2000 staff of local MHA is being planned (as of 2001).

(1) Courses
- Education of computer operators

(2) Tools provided
- Programs will be delivered from a studio located inside the main office of MHA in Jakarta to 32 provincial autonomies and two training centers. Image of a lecturer inside the studio is to be displayed for students to view on a large screen using a videoconference system.
- Providing streaming images equivalent to MPEG4 to PCs used by students will be possible.
- Data delivered includes supplemental reference materials for lectures, what is written by lecturers on blackboard, chats between the lecturer and students, and questionnaires and quizzes given by the lecturer during the lecture.

(3) Others
- Lecturers and attendees can collaborate with each other on PC's by way of terminals.

## 3. Advanced Activities

Information unavailable.

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

### 4.1 Status of IT Policy

#### 4.1.1 Overview

Efforts to implement IT common to all governmental agencies and the entire nation of Indonesia were transferred from the Office of Minister of State for Administrative Reform to the Office of Minister of State for Communications and Information when the Megawati administration was inaugurated in August 2001. In addition, the national IT coordination team (TKTI: Tim Koordinasi Telematika Indonesia), which was responsible for control and coordination of all ICT policies, was also transferred to the Office of Minister of State for Communications and Information. TKTI is composed of concerned members of the Cabinet, and submits recommendations to concerned organizations on reinforcement or policies of human resources in the information communication field. However, the authority to enforce policies does not belong to TKTI, but to concerned governmental offices or organizations. It is also responsible for coordination with provincial governments, national enterprises, or civil society, aiming at tuning an environment which allows all people to take advantage of information communication, by completing IT promotion efforts as early as possible.

Based on "the Decree of the President Number 9 in 2003 (Keppres No.9/2003)" promulgated on January 27, 2003, the President (formerly it was vice president) was appointed to chair of the team, and the Minister of State for Communication and Information to supervisor.

The Indonesian government announced the following ICT strategies as its policies, but action plans are neither created nor executed for specific policy goals to be achieved.

(1) Goals of the strategies

To take advantage of ICT to realize unification of the nation, people's welfare, and development which can be sustained.

(2) Main issues of the strategies

  (a) ICT to unify nation and to improve people's capability
- To unify the nation while promoting democratization and decentralization of authority.
- To provide all citizens with social and economic benefits by removing problems hindering information exchange, and by allowing them to access impartial and improved public services.
- To make more opportunities to utilize ICT for SMEs, enabling them to access a broader market.
- To improve international competitiveness of Indonesian industries within the global market, by improving productivity and efficiency, by implementing technological evolution within the manufacturing industry, and by improving distribution of products.
- To improve the ability to control central and provincial administrations, by improving transparency and efficiency of public services.

  (b) ICT in the society, for the society
- To improve living standards by using ICT to remove poverty and inequality, and to promote social welfare. ICT should be used in such a way that political and cultural gaps are removed and social unification is advanced.
- To maximize cooperation between government and civil society in order to solve the digital divide.
- To develop software in Indonesian so that ICT may be penetrated.

  (c) To improve infrastructure for national information communication
- To put emphasis on partnerships between civil society and foreign enterprises.
- To develop fund raising schemes for provincial areas which are unprofitable for business.

  (d) To improve the business environment of civil society

  (e) To improve the national capability and to promote science and technology

  (f) To construct electronic government: to take advantage of ICT for better administration

  (g) To reinforce organization of the TKTI that controls national ICT strategies

4.1.2 Policies and its Details

(1) National information system (SISFONAS: Sistem Informasi Nasional)

A multimedia city plan in Indonesia, "NUSANTARA 21", has been renamed to "SISFONAS" to suggest the concept of establishing a governmental information system using an integrated network connecting provincial administrative offices and the central government. This initiative aims to establish a stable infrastructure for an information system to support governmental activities.

It also aims to reform the governmental activity process, to provide prompt, accurate, efficient, and high quality public services, and to achieve good governance (improvement of accountability, recovery of people's trust, and promotion of people's participation).

It is handled by the Office of Minister of State for Communications and Information, whose activities so far include submitting reports as Minister's circular dated March 22, 2002 (No.65/M.KOMINFO/III/2002) to central and provincial governmental offices on the current status of development of the information system, and publishing official notices to require coordination regarding the Minister and "Plan for information technology development" without redundancy with other governmental departments. So, it has not reached the practice stage yet. This circular is compliant to "Coordination of national information technology development plan", the document dated April 18, 2002 submitted from the National Development Planning Agency (No.15444/M.PPN/04/2002).

(2) Regional IT Center of Excellence (RICE) project

This is a joint project between the Ministry of Industry and Trade and ASPILUKI (an association of computer software industry) that established a software park in Bandung to encourage IT industry in Indonesia. It aims to gradually extend activities throughout the nation.

(a) Targets

&lt;Service providers&gt;
- Software developer
- IT service provider
- System integrator

&lt;Users&gt;
- SMEs
- Large enterprises that run IT development projects
- Other IT related organizations within specific areas

(b) Services to be provided

&lt;Technical assistance&gt;
- Application development
- Business consulting
- Networking
- CAD, design

&lt;Construction of infrastructure&gt;
- Office space
- Computer center
- Tools for software development
- Network access (Internet access/broadband)
- System integration

&lt;Business services&gt;
- ASP (Application Service Provider)
- Web hosting
- Telemarketing, call center function, etc.

&lt;Training&gt;
- General knowledge/skill on IT
- Training on specific products
- Tele-education, training over the Internet, training on computers
- Examination center for certification

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

The Minister of State for Administrative Reform, who headed the national IT coordination team, revealed the following policies for human resource education using IT, within a Five-Year Action Plan drawn up in the circular of 2001 (No.133/M.PAN/5/2001):

- To reinforce cooperative relationship between IT industry and IT educational organizations, through research and development or construction of a network for education and training.
- To develop and implement curricula concerning IT.
- To include IT in curricula as an important element, to use it as a learning tool at schools, colleges, and training centers.
- To construct an e-learning program which uses a network such as GDLN.
- To utilize the Internet in education.

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

There are no cyber-laws enacted in Indonesia.

4.4  Vision

Information unavailable.

4.5  International and National Conference

Information unavailable.