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THE IMPLEMENTATION OF DISTANCE LEARNING IN INDONESIAN HIGHER EDUCATION

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ABSTRAK: *Artikel ini mengkaji implementasi pembelajaran jarak jauh pada pendidikan tinggi di Indonesia. Tujuannya untuk mengungkap berbagai konsep pendidikan jarak jauh termasuk definisi dan sejarah perkembangan serta model pem-belajaran jarak jauh yang telah diterapkan sejak sistem pendi-dikan ini diperkenalkan di Indonesia. Pendidikan jarak jauh di Indonesia telah dimulai sejak tahun 1950-an. Pembelajaran jarak jauh dapat dikelompokkan ke dalam tiga fase perkem-bangan, yaitu: fase perkenalan, sosialisasi, dan fase inovasi. Model pendidikan jarak jauh yang telah diterapkan di Indonesia adalah correspondence study, satellite Palapa, system komunikasi lewat radio, audiocassettes, program slide tape, video, televisi, system komunikasi elektronik Nusantara 21, dan teknologi video-conferencing.*

KATA KUNCI: *Distance education, e-learning, instructional technology.*

ONE of the educational models that has attracted the attention of Indonesian students currently is distance learning. Distance learning in Indonesia is a competitive alternative that can influence the growth of prospective human resources in Indonesia. It is not only useful for students who have geographical constraints but also for all socio-economical levels. Therefore, it is no longer limitedly offered in Open University (called Universitas Terbuka or UT) which is the university that totally practices distance learning models but in many conventional universities as well. UT, however, dominates the highest amount of students. Pannen[1] noted that in 1996 the UT was named as one of the mega universities in the world for having an enrollment rate of about 400.000 students. According to her calculations in 2003, the majority (95%) of UT students was working students and only 20% of the student population lived in remote areas.

The large number of students who involved in distance learning indicates that distance learning has been used as an alternative method for receiving education in UT. Therefore, a recent national law concerning the

Indonesian educational system mentioned that distance learning specifically as one of many choices available for Indonesians to obtain education. Distance learning has been approved at any level from elementary to tertiary; from formal degree granting to continuing education.[2] In another words, distance learning will be treated as being equal to other forms of education. In specific circumstances such as in the field of business, distance learning is considered as an elite educational model because of having sophisticated and high technology for transferring knowledge between instructors and students.

Despite the success of distance learning in terms of increasing the number of students, the quality is perceived as questionable. The educational institution has questioned the quality of the teaching learning process with respect to the interaction between teachers and students, teachers-students accommodation, teachers' feedback and students' achievement comparing face-to-face education.[3] In addition, the appropriate strategies used in distance learning become challenging as well.[4] Implementing distance education can be challenging because there are many aspects need to be considered. These aspects include instructional delivery systems, students' learning styles and cultural variations, models of distance education, and the availability of technology support. This article, however, just emphasizes into the concepts of distance learning including the definition and historical background of distance learning and the models of distance learning that have been implemented in Indonesia

CONCEPTS OF DISTANCE LEARNING

In this part, the writer would like to explain the definition and historical background of distance learning implemented in higher education in Indonesia.

The Definition of Distance Learning

The use of distance learning in this article refers to the distance education that has been well known. The term of distance learning is used just to differentiate the two terms of *education* like in *distance education* and *higher education* used in the topic above. The term of distance education will be used at the following discussion that means the distance learning. In the early 1990s, distance education was considered as a generic name for a distant educational system, which focused on using on air media like radio and teleconferencing.[5] Perry and Rumble[6] defined technical term "distance education" as an instructional activity, which does not need students' physical presence in the classroom. Dan Coldeway in Simonson, Smaldino,

Albright, & Zvacek[7] provided four useful approaches to understanding the framework of distance education. The four involve differing combination of time and place. They include same-time, same-place (ST-SP), different-time, same place (DT-SP), same-time, different place (ST-DP), and different-time, different-place (DT-DP). Actually, implementing distance education to support English instruction is not only the combination of place and time but also the combination of time, place, and technology support. It involves understanding how technological tools such as hardware (computer, video, radio, television, and telephone) and software (word processing, spread-sheet, database, material generator, data collection and data analysis, graphics, atlases, dictionaries, and so forth) can be integrated into teaching to support students learning.

In 1998, United States Distance Learning Association (USDLA) created a definition of distance education as quoted by Roblyer[8]: … *the acquisition of knowledge and skills through mediated information and instruction. Distance learning encompasses all technologies and supports the pursuit of lifelong learning for all.*

Roblyer states that this definition is not the final concept to be used let alone to be considered as the only one. He noted that most past definitions of distance learning included two things as the key components; the first, instructor and learner separated by time and/or geographic distance and the second, the media (including electronic, print resources, voice communications, and combinations of them), which were used to bridge the gap.

Based on the various definitions as have been given above, distance education can be understood from the following characteristics; (1) teacher-student separation, (2) students' accountability and independence, (3) teachers' creativity in managing, instructional resources, and (4) using technological innovation as instructional media.

The History of Distance Learning in Indonesia

Roblyer[9] divided distance learning into past, present, and future rationales and methods. In the past rationales and methods, he described the correspondence learning model. This approach used regular post office mail to asynchronously connect teachers and students through the educational institution. The teachers designed instruction such as lessons, readings, and assignments to be sent to the students. Then students were supposed to work on the assignments and mailed them back to the teachers. Different from the past model, present rationales and methods emphasize using

electronic means to support instruction. This approach uses radio, television, satellite technology including fiber-optic communication system to connect teachers and students. He also noted that the future model of distance learning is an interactive video-and-audio model that involves the activities of teachers and students to exchange information as if they are in the same place.

If Roblyer's concept of distance learning division is used for identifying the historical background of distance educational forms implemented in Indonesia, there are at least three phases of development that can be traced. They include (1) introduction phase, (2) socialization phase, and (3) innovation phase. These three phases can be used to describe the history of distance education in Indonesia.

Introduction Phase (1950s-1983)

Historically, distance education in Indonesia was introduced in the beginning of the 1950s through school broadcasting in West Java.[10] Education was designed for those who could not continue studying due to the geographical barriers and economic problem that was impacted by Indonesian independence war. In 1955, the term of distance education was used to describe *correspondence study,* which used the postal system to provide courses for upgrading teachers in order to improve the quality of teachers in the higher education.[11] The uncertainty of political turbulence of the *old order* under the leadership of President Soekarno, however, impacted an educational system including distance education. The focus of governmental policy was mostly directed to the political situation rather than the sector of education.[12] Consequently, the improvement of distance education ran slowly and the form of correspondence study took longer to be implemented than other forms of distance education.[13]

After the *New Order* government successfully took over the national authority from the *old order*, great attention was placed on improving human resources. The institution of an adequate financial budget given to the educational sector could observe these changes. The budget was taken from the result of selling domestic oil. Consequently, the wide use of distance education to support instructional practice was begun in 1970s.[14] It was characterized by developing a broadcasting program through radio at the primary school level. This was a successful model of independent learning.[15]

As was seen from the large amount of government support, students' enthusiasm, and wide spread acceptance in society, this

program was considerably successful although the emerging country was in the process of introduction. In another word, despite the implementation of the program was newly applicable in the country, its impact could be clearly seen in the acceptance of many parts.[16] Unfortunately, the practice of distance education was entirely inspired by the great success of western models.[17] It means that many distance education designers adopted all of the concepts of the distance model without considering social, economic, and cultural background as well as psychological factors and the preparedness of the teachers. The advancement in the field of mass communication technology, however, inspired the Indonesian government to join the world of communication by launching a communication satellite, Palapa, on August 16, 1976. The Palapa satellite was the first sophisticated communication system in Asian countries.[18] For educators, such success in the field of mass communication technology can contribute new strategies for distance education development.[19]

In 1978 or two years after the Indonesia nation officially launched the use of satellite Palapa, a group of rectors (presidents) of ten government universities and teacher training institutes in the eastern part of Indonesia organized the Eastern Islands Universities Association.[20] The purpose was to promote the further development of its institutions through the sharing of ideas and resources. In addition, educational resources were very scarce in the eastern islands so that the institutes would not be able to advance rapidly. Association among the universities was the best solution to accommodate integrated productivity improvement.

Fortunately, the U.S. Agency for International Development initiated the AID Rural Satellite Program (RSP) in 1980. The main purpose of this project was to explore the potential of communication systems as a means of extending the educational resources in the remote and rural areas. The pilot project was administered in three developing countries, Indonesia, West Indies, and Peru.[21] The program received a warm reception from the rectors' forum and was well supported financially through the RSP. This progressive change, however, was not fully implemented until UT was formally established.

Socialization Phase (1984-1993)

In 1984, distance education in Indonesia became very popular. It can be described through two interesting dimensions; the develop-

ment of distance education model in the higher education and the introduction of distance education model in high schools. The first dimension refers to the role of the Indonesian Open University (Universitas Terbuka), which offered a distant instructional setting for delivering all courses. Pannen[22] stated that when UT was introduced in 1984, distance education was directed to higher education for recent high school graduates who could not go to conventional university due to economic and geographical barriers. UT was also provided for working teachers in order to upgrade the quality of their working. The second dimension deals with pilot project designed for high school students who lived in remote or urban areas and those who might work for living and help their parents during the school hours.[23]

Similar to Panen, UNESCO[24] noted that the establishment of UT was designed to address many needs. It was designed to provide flexible and inexpensive education, reach people unable to attend face-to-face education, increase access to higher education, provide training in many areas demanded by economic and cultural development, and upgrade the qualifications of primary and secondary school teachers. The establishment of UT provided an institution that made distance education more accessible and reliable.

The UT enrollment records indicated that there were 270.000 applicants, but only 60.000 students could be admitted to the program.[25] This was a fantastic amount compared with other new government universities in the country. In the same time, the universities located in the eastern part of Indonesia through the rector forum cooperating with RSP recommended using a satellite system that consisted of 11 sites linking nine of the 10 institutes in the Directorate General in Jakarta and Agriculture Institute at Bogor. Shaw[26] noted that the University of Halu Oleo (UNHALU) in Kendari was not included in the plan because it was a very new university. The 11 sites to be connected were, from east to west: (1) Cenderawasih University (UNCEN) in Jayapura, (2) Cenderawasih University Agriculture Campus (UNCEN-M) in Manokwari, (3) Pattimura University (UNPATTI) in Ambon, (4) Sam Ratulangi University (UNSRAT) and the Institute of Education (IKIP) in Manado, (5) Tadulako University (UNTAD) in Palu, (6) Hasanuddin University (UNHAS) in Makassar, (7) Institute of Education (IKIP) in Makassar, (8) Mulawarman University (UNMUL) in Samarinda, (9) Lambung Mangkurat University (UNLAM) in Banjarmasin, (10)

Directorat Genderal of Higher Education (DIKTI) in Jakarta, and (11) Agricultural Institute (IPB) in Bogor.

In 1989, correspondence written courses were available through the Open Secondary Schools (OJSS) using a radio communication system.[27] Until 1990, the broadcasted subject matter included mathematics, natural sciences, social sciences, Indonesian and foreign languages, Pancasila moral education, religion, general education, and teaching methods. But, since 1991, the program has developed and delivers content to a teacher that is based on curriculum for the Two-Year-Diploma. This is equivalent to the program provided by the Open University. Data indicated that more than 89.000 primary school teachers from 14 provinces participated in this program.[28]

In 1991, after reviewing the development of distance education in Indonesia, the Minister of Culture and Education decided to recommend guidelines for both conventional universities and UT to implement a distance education model. This provided an opportunity for the universities to build their commitment in doing integrated productivity improvement, providing quality education, and identifying the professional outcomes in all areas.

Innovation Phase (1994-now)

In this phase, the innovation of distance instructional delivery system became more sophisticated. Correspondence study and the Palapa satellite were not only used to deliver instructional materials but also audio, video, and even teleconference system. Idris[29] stated that since 1994, the use of radio programs, audiocassettes, slide tape programs, and video programs to support educational practice in Open High Secondary schools (SMP Terbuka) seemed to be appealed. The program was also delivered through Indonesian Educational Television (TPI). More than 275 Educational Television programs were produced for SMP Terbuka.[30]

In 1995, UT was named one of the mega universities in the world for having an enrollment rate at around 400.000 students.[31] However, the enrollment could not constantly increase because of the monetary crisis that happened in 1996. The changes in the student body at UT can be seen in Table 1.

Table 1
The Number of Students of UT year 1996 to 2001

YEAR	NUMBER OF STUDENTS	PERCENTAGE
1996	397.543	-0.61
1997	417.204	0.10
1998	442.897	0.11
1999	324.661	-18.83
2000	289.248	-27.68
2001	285.926	-28.52
2002	236.203	-40.95

As noted in Table 1, student enrollment increased 42.897 (0.10%) in 1997 and 42.897 (0.11%) in 1998. This was when UT was identified as one of mega universities in the world. The political situation in the country, however, became unstable in late 1998 so that the number of enrolled students dramatically decreased until 2002.

Since the establishment of the national electronic communication system called "Nusantara-21" in 1997, the Internet has been seen as a promising information and communication medium by many people in Indonesia.[32] Belawati[33] studied the feasibility of student counseling at a distance via the Internet. It showed the Internet to be an effective medium for communicating with students. This advance in the electronic communication system has accelerated various models of distance education designed by universities.

Some universities in Indonesia developed their electronic communication networks by involving other institutions to support distance education. Hardono and Belawati[34] said the University of Indonesia collaborated with the World Bank for the Global Development Learning Network (GDLN) project to practice videoconferencing technologies for the purpose of distance education. The Institute of Technology in Bandung (ITB) has initiated some innovations in e-learning. In addition, the Asian Initiative on Internet (AI3) Center, which collaborates with some Japanese universities, has offered online course and digital library development (now called Indonesian digital library network).

Two other universities, Gadja Mada University (UGM) in Yogyakarta and the Institute of Agriculture in Bandung (ITB) made preparations and offered small proportions of their programs via distance education, but did not open to the public because they still used a limited network system.[35] The same as UGM and ITB, University of Jember also developed web-based courses that were housed on the Directorate General of Higher Education

(DIKTI) website. The other university that used the DIKTI website to develop web-based courses is Hasanuddin University which is located in the Eastern part of Indonesia.[36]

Looking at the three developmental phases of distance education as mentioned above, distance education in Indonesia is no longer limited to the disadvantage students who live in remote areas and those who have geographical barriers but has become a new trend and alternative choices besides conventional setting. In addition, sophisticated technology supports, systematic instructional developments, and effective instructional delivery systems are the discrete characteristics that have been addressed to distance education. Here, distance education has taken an important role to bring forward the mission of educational equity for the whole people in Indonesia.

MODELS OF DISTANCE EDUCATION

Models of distance education can be described through communication delivery systems of instructional materials in relation to the use of technology for the purpose of learning. Simonson, Smaldino, Albright, and Zvacek[37] presented a model of communication in distance education that is called *Taxonomy of Distance Education Technologies.* This taxonomy can be divided into correspondence study, prerecorded media, two-way audio, two-way audio with graphics, one-way live video, two-way audio/video, and desktop two-way audio/video. The model for distance communication delivery systems is described in the Table 2.

Table 2
Communication System in Distance Education

MODELS OF DISTANCE EDUCATION	TECHNOLOGY USAGE
Correspondence study	Regular post office mail, copy machines, electronic mail
Prerecorded Media	Audiotapes and videotapes
Two-way Audio	Telephone and radio
Two-way Audio with Graphics	Computer network
One-way Live Video	Television and video transmission system such as microwave, ITFS, and Satellite.
Two-way Audio, One-way Video	Television, Video, and Toll-free telephone system
Two-way Audio/Video	Telecommunication network such leased telephone lines |(T1), fiber-optics network (DS3), and microwave network.
Desktop Two-way audio/video	Multimedia computer with camera and microphone, high speeds network connection.

Similar to the distance communication model described in Table 2, Roblyer[38] historically divided distance education models into three

rationales and methods that he called; past, present, and future. Past rationales and methods have used correspondence study, print materials, videotapes and instructional television to deliver education at distance. Current rationales and methods evolved due to growth in the use of instructional technologies such as electronic means or the Internet network. Future rationales and methods involve a *life-like* instructional environment that is intentionally designed to foster interaction between teachers and students. It is similar to face-to-face relationships because of using interactive video-and-audio systems. Interactive communication enables teachers-students relationship to exchange information as if they are in the same place. It engages compressed video and fiber-optic cables to connect sites used to implement the distance education.

In 1997, the Institute of Distance Education at the University of Maryland divided distance education into three models; model A: *distributed classroom*, model B: *independent learning*, and model C: *open learning*. Table 3 describes three models of distance education including description and characteristics in distant teaching and learning process.

Table 3

Three Models of Distance Education

MODELS	DESCRIPTION & CHARACTERISTICS
Distributed Classroom	▪ Involving synchronous communication ▪ Providing number of sites ▪ Students may enroll at any sites convenient to them ▪ Institutions are able to serve a small numbers of students in each location.
Independence Learning	▪ There is no class session; students study independently based on guidelines in the syllabus ▪ Interaction may exist in other circumstances ▪ Class presentation would be printed materials, audio, and videotapes. ▪ Instructional materials are designed for several years and often revised by comprehending students' need. ▪ Presentation of course content is through print, computer disk, or videotape that can be accessed at any time in any places. ▪ Course materials are used for more than one semester.
Open Learning Classroom	▪ Students come together periodically in groups in specified locations for instructor-led class session through interactive technologies. ▪ Class sessions are for students to discuss and clarify concepts and engage in problem solving activities, group, simulations, and other applied learning exercises.

Adapted from Model of Distance Education Maryland University.[39]

Models of distance education in Indonesia were adopted from the distance education model practiced in western countries. Ramanujam[40]

stated that the planners of UT heavily depended on the western models and the western consultants from United Kingdom (England), Canada, and the United States of America. However, it is not only designed for adult learners but also for high school levels because of geographical and economical constraints. Sadiman[41] found that there have been 34 open high schools throughout Indonesia and based on the characteristics of distance education the schools rely on self-study. As the consequence of limitations in technology support, the use of technology varies from one school to another and in particular subject matters as wells. Sadiman[42] also stated that nine subject areas including mathematics, biology, English language, Indonesian language, physics, Pancasila moral education, geography, economics, and national history were presented in print modules, while the four non-academic subjects such as arts, physical education and health, religion, and vocational skills were presented in the form of pamphlets. These pamphlets contained individual lessons and summaries of each lesson. Now, print modules have replaced the pamphlets. These modules contain more detail and can be modified to fit a student's individual needs.

The print materials were supplemented with audiovisual materials, such as slide-tape programs, audiotapes, and radio programs and then print materials are developed into videotape program as has been performed today. A teacher's guide and students' guide to facilitate utilization accompanied each audiovisual supplement. That is the role of Communications Technology Center for Education and Culture that has been established in several cities in Indonesia. Furthermore, Sadiman[43] stated that although the distance high school students learned from print materials, they also hoped to learn from radio programs based on the given schedule because instructional radio program can be listened to at each technology center. Instructional radio broadcasts were designed to improve students' audio communication competence as an aid to learning English, present subject content in more interesting ways, develop imagination in students, assist students to consolidate the subject content studied through print modules, and dive essential points greater emphasis.[44]

Since *Nusantara-21* (the Indonesian electronic communication facility) was built in 1997, the use of computer and electronic media such as the Internet network system to support distance education became gradually well known. There have been many efforts to make distance education more effective. One of the efforts involved redesigning the tutorials. Belawati, Anggoro, Hardhono, and Darmayanti[45] designed tutorials using the *Internet and fax-Internet technologies*. The tutorials were provided exclusively to UT students throughout Indonesia. The Internet tutorials

maximized the use of email list as a model of communication. One or more tutors taught every single course and each tutor was responsible to teach at least five students using. While fax tutorials used fax machines as a means of communication. Unlike face-to-face conventional classroom, the implementation of tutorials, students' participant rate and tutor responsiveness rate evaluation were conducted through the Internet and fax-Internet.

Based on various distant instructional experiences that have been implemented both in high school and university levels, the models of distance education have given a significant contribution to the history of distance education delivery in Indonesia in spite of the quality of the outcomes still becomes the basis of controversial debates in the country. The significance of the contributions can be viewed from the perspective of students' amount that live in rural areas and those who have financial problems can experience adequate education through distance education.

The selection of a distance education model to deliver English instruction can be adapted through comprehensive observation of the instructional media availability considering the learning styles and cultural characteristics of Indonesian learners. Ely[46] suggested some points to be considered in selecting appropriate media. They are; easy access for students, matching with objectives, easy to use, and passing certain tests before incorporating it into the distance scheme. The tests include the following questions; will the learner have access to the medium at home, work or in a community setting? Does the access include the necessary software? Can the cost of the material be justified, that is, is it cost effective for the instructor to produce and for the students to acquire? In terms of selecting appropriate media to deliver English instruction, Roblyer[47] recommended using the following assumptions to select technology as a teaching tool in order to reach the ability of multiple language skills. The assumptions are: 1) Student center and developmental appropriate instruction, 2) Integrated English skills instruction, 3) Interactive and meaningful activities, 4) Content integrated instruction, 5) Real life application, and 6) Assisted proficiency standards.

Based on the models of distance education that were implemented to deliver instructional materials including English subject matter in Indonesia as mentioned in the three phases of development above, the instructional media that have been used are printed materials; radio, telephone, and audiotapes; videotapes and television; and computer-based technology. The application of these media, however, has been used separately to support instructional delivery. In order to have a specific description of each instructional medium, the following explanation is discussed;

Printed Materials

Seels and Richey[48] used the term *print technologies* to refer to printed materials. The earliest model of distance education in Indonesia is correspondence study that primarily used the printed materials for supporting teaching and learning process.[49] Syllabus, study guide, lessons, readings, and assignments are sent to the students through regular post office and electronic mails. For students who cannot access the Internet connection system, the printed materials are mailed through the post office. On the other hands, the printed materials are sent through electronic mail for those who can easily access the Internet system.[50]

Radio, Telephone and Audiotapes

Besides printed materials, models of distance education that have been delivered to support the English instruction in Indonesia were radio and telephone technologies.[51] Instructional media is used to improve students' audio communication competence of English language, present subject content in more interesting ways, develop students' imagination, assist students to consolidate the subject content studied through printed modules, and give essential points greater emphasis. In addition, radio as a synchronous medium can be listened at the same time and in different locations by the students. The instructors can give students some additional tasks dealing with English program broadcasted through Australian radio, Singapore, England, and even American radio.

The weakness of radio because of limited use, just for one-way communication, will be supported by audio two-way communication through telephone. The limitation of opportunity to motivate students through printed materials can be enhanced by the use of both radio and telephone.

Sadiman[52] stated that recorded tapes or cassettes offered a lot of times for the students to use rather than radio and telephone that give a few opportunities for the students to interact. Students can listen to the recorded materials at any time and in any places they want. The students can also read through printed and recorded materials as wells. The confusing points can be asked through telephone when the instructional materials are presented.

Television

Broadcast television utilizes a wide bandwidth to ensure quality reception.[53] In Indonesia, students can watch English instructional programs through Indonesian instructional Television (TPI) at the same

time in different places. The instructors can design some parts instructional materials that directly link to TPI program.

Computer- Based Technology

English Language Teaching (ELT) has been with us for many years and its significance continues to grow, fuelled, partially at least, by the Internet.[54] Computer mediated communication (CMC) can allow for either synchronous or asynchronous communication.[55] CMC activities can involve a variety of participant configurations including one individual sending message to another, one individual sending to many others, groups sending to other groups, etc. It seems that technology innovations have gone hand in hand with the growth of English as the means of communication. Therefore, the computer has a great impact in English language teaching.

According to Jarvis[56] computers in ELT can be viewed from two perspectives. Firstly, computer-assisted language learning (CALL) was developed to integrate the pedagogical applications of the technology. Second perspective was the use of computers for assisting and understanding what constitutes the English language and how it works. Yet, although both CMC and CALL have been implemented to support English instruction in Indonesia, electronic tutorials become integral part that should be provided in order to increase students' potential of using technology.

CONCLUSION

The strong commitment to accelerate the improvement of productivity in human resources in Indonesia has influenced the historical background of distance learning. From the historical perspectives, distance education is viewed from three phases of development; the introductory phase, which took place from the 1950s to 1983, the socialization phase from the 1984 to 1993, and the innovation phase from the 1994 through now. Correspondence study and satellite Palapa are categorized as instructional delivery systems in the introductory phase, radio communication system in the socialization phase, and audiocassettes, slide tape program, video, television, Nusantara 21 electronic communication system, and videoconferencing technology are used to deliver instructional messages in the innovation phase.

Despite various models of distance education such as correspondence study, satellite Palapa, radio communication system, audiocassettes, slide tape program, video, television, Nusantara 21 electronic communication

system, and videoconferencing technology have been implemented in many subject matters, the model of distance education that have been specifically used to deliver English instruction in Indonesia performed the following instructional media and technologies. They are; printed materials, radio and telephone, audiotapes and television, and computer-based technology. Unfortunately, the application of the instructional technologies tended to be implemented separately. In another words, the use of the technologies to deliver English instruction coordinated in their implementation.

ENDNOTES:

1. P. Pannen, Distance education public policy and practice in the higher education: The case of Indonesia, *Brazilian Review of Open and Distance Learning,* 3 (4), 2005, retrieved March 9, 2005 from: http://www.abed.org.br/publique/cgi/cgilua.exe/sys/start.htm?UserActiveTemplate=2ing&infoid=817&sid=70.
2. Pemerintah Republik Indonesia, *Rancangan Peraturan Pemerintah SISDIKNAS tentang PendidikanJarak Jauh*, 2005, retrieved August 15, 2005, from: http://www.depdiknas.go.id/RPP/modules.php?name=News&file=article&sid=49&order=…
3. T. Belawati, M. T. Anggoro, A. P. Hardono & T. Darmayanti, Electronic Tutorials: Indonesian experience, April, 2002, *The International Review of Research in Open and Distance Learning,* 3 (1), retrieved December 15, 2005 from: http://www.irrodl.org/index.php/irrodl/article/view/74/144.
4. N. Idrus, Dilemas in Open Learning in developing countries, a case in Indonesia, *The Second Pan-Commonwealth Forum on Open Learning Transforming Education for Development*, 2002, retrieved December 15, 2005 from: http://www.col.org/pcf2/papers/idrus.pdf.
5. M. T. Anggoro, Pendidikan jarak jauh dan penerapannya di Indonesia, *Jurnal Studi Indonesia*, 3, 1993, retrieved December 15, 2005 from: http://pk.ut.ac.id/jsi/3toha.htm.
6. W., Perry & G. Rumble, *A short guide to distance education*, Cambridge: International Extension College,1987, p. 15.
7. M. Simonson, S. Smaldino, M. Albright & S. Zvacek, *Teaching and learning at a distance*, New Jersey: Pearson Education, Inc, 2003, p. 27.
8. M. D. Roblyer, *Integrating Educational Technology into Teaching*, 3th edition, Upper Saddle River, New Jersey: Pearson Education Inc, 2004, p. 190.
9. M. D. Roblyer, *Integrating Educational Technology into Teaching*, p. 89.
10. A. Zuhairi, Problems and Challenges for a Mega-university in a Developing Country: A Case Study of Universitas Terbuka, Indonesia, *Jurnal Pendidikan Terbuka dan Jarak Jauh*, 2 (1), 2001, retrieved December 15, 2005 from: http://pk.ut.ac.id/ptjj/21amin.htm.
11. B. Setiyadi, L. Holiday & R. Lewis, *A survey of language learning strategies in a tertiary EFL in Indonesia*, 1992, retrieved December 15, 2005 from: http://www.aare.edu.au/99pas/set99468.htm.

12. Y. H. Miarso, *Perkembangan Sistem Pendidikan Jarak Jauh*, Jakarta, Indonesia: Universitas Terbuka1989, p. 23.
13. B. Setiyadi, L. Holiday & R. Lewis, *A survey of language Learning Strategies in a Tertiary EFL in Indonesia*, p. 3.
14. A. Zuhairi, Problems and Challenges for a Mega-university in a Developing Country: A Case Study of Universitas Terbuka, Indonesia, *Jurnal Pendidikan Terbuka dan Jarak Jauh*, 2 (1), 2001, from: http://pk.ut.ac.id/ptjj/21amin.htm.
15. Y. H. Miarso, *Perkembangan Sistem PendidikanJ Jauh*, p. 40.
16. M. T. Anggoro, Pendidikan Jarak Jauh dan Penerapannya di Indonesia, *Jurnal Studi Indonesia*, 3, 1993, retrieved December 15, 2005 from: http://pk.ut.ac.id/jsi/3toha.htm.
17. S. T. Marina, Facing the Challenges, Getting the Right Way with Distance Learning, *Education at a distance magazine and journal 15*(3), 2001, retrieved December 15, 2005 from: http://www.usdla.org/html/journal/MAR01_issue/article03.html.
18. M. D. Ibrahim, Planning and Development of Indonesia's Domestic Communications Satellite System Palapa, *Online Journal of Space Communication*, *8,* 2005, retrieved March 9, 2005 from: http://satjournal.tcom.ohiou.edu/issue8/his_marwah.html.
19. N. Idrus, *A model for assuring the quality of Higher Education Institutes*, Paper presented at the SEAAIR Inaugural Conference, Kuching, Malaysia 23-25 October 2001, retrieved December 15, 2005 from: http://www.ipmimba.ac.id.
20. W. D. Shaw, Distance Education via Satellite: An Early Case Study of the Indonesian Distance Education Satellite System, *Online Journal of Space Communication Issue, 8*, retrieved December 15, 2005 from: http://satjournal.tcom.ohiou.edu/issue8/his_shaw.html#top.
21. W. D. Shaw, Distance Education via Satellite: An Early Case Study of the Indonesian Distance Education Satellite System, from: http://satjournal.tcom.ohiou.edu/issue8/his_shaw.html#top.
22. P. Pannen, Distance Education Public Policy and Practice in the Higher Education, from: http://www.abed.org.br/publique/cgi/cgilua.exe/sys/start.htm?UserActiveTemplate=2ing&infoid=817&sid=70.
23. A. S. Sadiman, The Indonesian Open Junior Secondary Schools, *World Bank Global Distance Education Net,* 2003, retrieved January 5, 2006 from: http://www1.worldbank.org/disted/Policy/Program/pri-02.html.
24. UNESCO, *Trends, policy and strategy considerations*, 2002, retrieved December 30, 2005, from: http://unesdoc.unesco.org/images/0012/001284/128463e.pdf.
25. M. T. Anggoro, Pendidikan Jarak Jauh dan Penerapannya di Indonesia, from: http://pk.ut.ac.id/jsi/3toha.htm.
26. W. D. Shaw, Distance Education via Satellite: An Early Case Study of the Indonesian Distance Education Satellite System, p. 3.
27. S. T. Marina, Facing the Challenges, Getting the Right Way with Distance Learning, *Education at a distance magazine and journal 15*, p. 3.
28. N. Idris, Innovative Use of Mass Communication Technology for Education in Indonesia, *Jurnal Studi Indonesia,* 7 (2), 1997, retrieved January 7, 2006 from: http://pk.ut. ac.id/jsi/72naswil.htm.

29. N. Idris, Innovative Use of Mass Communication Technology for Education in Indonesia, *Jurnal Studi Indonesia,* 7 (2), p. 2.
30. A. S. Sadiman, The Indonesian Open Junior Secondary Schools, *World Bank Global Distance Education Net,* 2003, from: http://www1.worldbank.org/disted/Policy/Program/pri-02.html.
31. P. Pannen, Distance Education Public Policy and Practice in the Higher Education: The Case of Indonesia, *Brazilian Review of Open and Distance Learning, 3,* p. 4.
32. T. Belawati, M. T. Anggoro, A. P. Hardono, & T. Darmayanti, Electronic Tutorials: Indonesian Experience, *The International Review of Research in Open and Distance Learning,* 3, 2002, p. 1.
33. T. Belawati, *Mediated Counseling Services: An Effort to Increase Student Persistence in Distance Education,* Jakarta: Universitar Terbuka, 1998, p. 16.
34. A. P. Hardhono & T. Belawati, Base-line Surveys for the Utilization of Fax-Internet Integration Technology for Distance Learning Support. Presented at ICDE Conference on January 1999, retrieved December 15, 2005 from: http://reseau.crdi.ca/en/ev-10425-201-1-DO_TOPIC.html.
35. P. Pannen, Distance Education Public Policy and Practice in the Higher Education: The Case of Indonesia. *Brazilian Review of Open and Distance Learning, 3,* p. 4.
36. W. D. Shaw, Distance Education via Satellite: An Early Case Study of the Indonesian Distance Education Satellite System, p. 15.
37. M. Simonson, S. Smaldino, M. Albright & S. Zvacek, *Teaching and Learning at a Distance*, New Jersey: Pearson Education, Inc, 2003, p. 90.
38. M. D. Roblyer, *Integrating Educational Technology into Teaching*, 2004, p. 205.
39. Maryland University, Institute of Distance Education, *Model of Distance Education*, 1997, retrieved March 21, 2006 from: http://www.umuc.edu/ide/modlmenu.html.
40. P. R. Ramanujam, Distance Open Learning in the Developing Asian Countries: Problems and Possible Solutions, *STRIDE, Indira Gandhi National Open University, New Delhi, India* 2001, retrieved January 5, 2006 from: http://www.fernuni-hagen.de/ZIFF/ziffp117.doc.
41. A. S. Sadiman, The Indonesian Open Junior Secondary Schools, *World Bank Global Distance Education Net,* 2003, p. 3.
42. A. S. Sadiman, The Indonesian Open Junior Secondary Schools, *World Bank Global Distance Education Net,* 2003, p. 9.
43. A. S. Sadiman, The Indonesian Open Junior Secondary Schools, *World Bank Global Distance Education Net,* 2003, p. 15.
44. Departemen Pendidikan Nasional Republik Indonesia, *Rencana Pembangunan Lima Tahun Kelima*, Jakarta: DEPDIKBUD, 1989, p. 8.
45. T. Belawati, M. T. Anggoro, A. P. Hardono & T. Darmayanti, Electronic Tutorials: Indonesian Experience, *The International Review of Research in Open and Distance Learning,*2002, *3*, p. 21.
46. Donald P. Ely, Selecting Media for Distance Education, Syracuse, New York: ERIC Clearinghouse on Information and Technology, 2003, p. 4.
47. M. D. Roblyer, *Integrating Educational Technology into Teaching*, p. 238.
48. B. Seels & R. C. Richey, *Instructional Technology: The Definition and Domains of*

the Field, Bloomington, IN: Association for Educational Communication and Technology, 1994, p. 28.

49. P. Pannen, Distance Education Public Policy and Practice in the Higher Education: The Case of Indonesia, *Brazilian Review of Open and Distance Learning, 3,* p. 27.
50. M. C. Utama, A. Sagitri and D. Tresna, Aplikasi System Pendidikan Jarak Jauh Berbasis Web, *Jurnal Pendidikan Terbuka dan Jarak Jauh*, I (2), 2000, retrieved February 28, 2006, from: http://pk.ut.ac.id/ptjj/12metra.htm.
51. N. Idrus, *A Model for Assuring the Quality of Higher Education Institutes*, 2001, p. 4.
52. A. S. Sadiman, The Indonesian Open Junior Secondary Schools, *World Bank Global Distance Education Net,* 2003, p. 21.
53. P. Kuntz, *Distance Education Technology: Foreign Language Instruction in the Central States*, Paper presented at the Annual Meeting of the Central States Conference on the Teaching of Foreign Languages, 1998, p. 13. retrieved January 5, 2006, from: http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/25/34/67.pdf.
54. H. Jarvis, Investigating the Classroom Applications of Computers on EFL Courses at Higher Education Institutes, *Journal of English for Academic Purposes,* 3 (2), 2004, p. 111-137.
55. C. Chapelle, *English language learning and technology,* Amsterdam, Philadelphia: John Benjamin Publishing Company, 2003, p. 25.
56. H. Jarvis, Investigating the Classroom Applications of Computers on EFL Courses at Higher Education Institutes, p. 140.

DAFTAR PUSTAKA:

Anggoro, M. T., Pendidikan Jarak Jauh dan Penerapannya di Indonesia, *Jurnal Studi Indonesia*, 3, 1993, retrieved December 15, 2005 from: http://pk.ut.ac.id/jsi/3toha.htm.

Belawati, T., M. T. Anggoro, A. P. Hardono & T. Darmayanti, Electronic Tutorials: Indonesian experience, April, 2002, *The International Review of Research in Open and Distance Learning,* 3 (1), retrieved December 15, 2005 from: http://www.irrodl.org/index.php/irrodl/article/view/74/144.

Belawati, T., *Mediated Counseling Services: An Effort to Increase Student Persistence in Distance Education,* Jakarta: Universitar Terbuka, 1998, p. 16.

Chapelle, C., *English language learning and technology,* Amsterdam, Philadelphia: John Benjamin Publishing Company, 2003, p. 25.

Departemen Pendidikan Nasional Republik Indonesia, *Rencana Pembangunan Lima Tahun Kelima*, Jakarta: DEPDIKBUD, 1989, p. 8.

Donald P. Ely, *Selecting Media for Distance Education*, Syracuse, New York: ERIC Clearinghouse on Information and Technology, 2003, p. 4.

Hardhono, A. P. & T. Belawati, Base-line Surveys for the Utilization of Fax-Internet Integration Technology for Distance Learning Support. Presented at ICDE Conference on January 1999, retrieved December 15, 2005 from: http://reseau.crdi.ca/en/ev-10425-201-1-DO_TOPIC.html.

Ibrahim, M. D., Planning and Development of Indonesia's Domestic Communi-

cations Satellite System Palapa, *Online Journal of Space Communication*, 8, 2005, retrieved March 9, 2005 from: http://satjournal.tcom.ohiou.edu/issue8/his_marwah.html.

Idris, N., Innovative Use of Mass Communication Technology for Education in Indonesia, *Jurnal Studi Indonesia,* 7 (2), 1997, retrieved January 7, 2006 from: http://pk.ut. ac.id/jsi/72naswil.htm.

Idrus, N., *A Model for Assuring the Quality of Higher Education Institutes*, Paper presented at the SEAAIR Inaugural Conference, Kuching, Malaysia 23-25 October 2001, retrieved December 15, 2005 from: http://www.ipmimba.ac.id.

Idrus, N., Dilemas in Open Learning in developing countries, a case in Indonesia, *The Second Pan-Commonwealth Forum on Open Learning Transforming Education for Development*, 2002, retrieved December 15, 2005 from: http://www.col.org/pcf2/papers/idrus.pdf.

Jarvis, H., Investigating the Classroom Applications of Computers on EFL Courses at Higher Education Institutes, *Journal of English for Academic Purposes,* 3 (2), 2004.

Kuntz, P., *Distance Education Technology: Foreign Language Instruction in the Central States*, Paper presented at the Annual Meeting of the Central States Conference on the Teaching of Foreign Languages, 1998, p. 13. retrieved January 5, 2006, from: http://eric.ed.gov/ERICDocs/data/ericdocs2/content_ storage_01/0000000b/80/25/34/67.pdf.

Marina, S. T., Facing the Challenges, Getting the Right Way with Distance Learning, *Education at a distance magazine and journal 15*(3), 2001, retrieved December 15, 2005 from: http://www.usdla.org/html/journal/MAR01_issue/article03.html.

Maryland University, Institute of Distance Education, *Model of Distance Education*, 1997, retrieved March 21, 2006 from: http://www.umuc.edu/ide/modlmenu.html.

Miarso, Y. H., *Perkembangan Sistem Pendidikan Jarak Jauh*, Jakarta, Indonesia: Universitas Terbuka1989.

Pannen, P., Distance Education Public Policy and Practice in the Higher Education: The Case of Indonesia, *Brazilian Review of Open and Distance Learning,* 3 (4), 2005, retrieved March 9, 2005 from: http://www.abed.org.br/publique/cgi/cgilua.exe/sys/start.htm?UserActiveTemplate=2ing&infoid=817&sid=70.

Pemerintah Republik Indonesia, *Rancangan Peraturan Pemerintah SISDIKNAS tentang PendidikanJarak Jauh*, 2005, retrieved August 15, 2005, from: http://www.depdiknas.go.id/RPP/modules.php?name=News&file=article&sid=49&order=…

Perry, W. & G. Rumble, *A short guide to distance education*, Cambridge: International Extension College,1987, p. 15.

Ramanujam, P. R., Distance Open Learning in the Developing Asian Countries: Problems and Possible Solutions, *STRIDE, Indira Gandhi National Open University, New Delhi, India* 2001, retrieved January 5, 2006 from: http://www.fernuni-hagen.de/ZIFF/ziffp117.doc.

Roblyer, M. D., *Integrating Educational Technology into Teaching*, 3th edition, Upper Saddle River, New Jersey: Pearson Education Inc, 2004, p. 190.

Sadiman, A. S., The Indonesian Open Junior Secondary Schools, *World Bank Global Distance Education Net,* 2003, retrieved January 5, 2006 from: http:// www1.worldbank.org/disted/Policy/Program/pri-02.html.

Seels, B. & R. C. Richey, *Instructional Technology: The Definition and Domains of the Field*, Bloomington, IN: Association for Educational Communication and Technology, 1994, p. 28.

Setiyadi, B., L. Holiday & R. Lewis, *A survey of language learning strategies in a tertiary EFL in Indonesia*, 1992, retrieved December 15, 2005 from: http:// www.aare.edu.au/99pas/set99468.htm.

Shaw, W. D., Distance Education via Satellite: An Early Case Study of the Indonesian Distance Education Satellite System, *Online Journal of Space Communication Issue, 8*, retrieved December 15, 2005 from: http://satjournal.tcom. ohiou.edu/issue8/his_shaw.html#top.

Simonson, M., S. Smaldino, M. Albright & S. Zvacek, *Teaching and learning at a distance*, New Jersey: Pearson Education, Inc, 2003.

UNESCO, *Trends, Policy And Strategy Considerations*, 2002, retrieved December 30, 2005, from: http://unesdoc.unesco.org/images/0012/001284/128463e.pdf.

Utama, M. C., A. Sagitri and D. Tresna, Aplikasi System Pendidikan Jarak Jauh Berbasis Web, *Jurnal Pendidikan Terbuka dan Jarak Jauh*, I (2), 2000, retrieved February 28, 2006, from: http://pk.ut.ac.id/ptjj/12metra.htm.

Zuhairi, A., Problems and Challenges for a Mega-university in a Developing Country: A Case Study of Universitas Terbuka, Indonesia, *Jurnal Pendidikan Terbuka dan Jarak Jauh*, 2 (1), 2001, retrieved December 15, 2005 from: http:// pk.ut.ac.id/ptjj/21amin.htm.