

PROVISION OF STUDENT LEARNING SUPPORT SERVICES IN A LARGE-SCALE DISTANCE EDUCATION SYSTEM AT UNIVERSITAS TERBUKA, INDONESIA

**Aminudin ZUHAIRI
Irma ADNAN
Dina THAIB
Universitas Terbuka, INDONESIA**

ABSTRACT

This paper addresses the practice and experience of Universitas Terbuka (UT) in the provision of learning support services for students in a large-scale distance education system. The UT, which has a network of 37 regional offices and participating institutions, has challenges to provide and manage effective learning support system for more than 340,000 students, residing in various locations of Indonesia, a country with diverse level of the quality in terms of transportation, communication and technological infrastructure and facilities. UT has developed a systematic learning support system for distance students on the considerations that students' independent and autonomous learning effort have to be enhanced with institutional support, which is managed centrally from the Headquarters as well as regionally by each of the Regional Offices throughout the country. UT student learning support system includes services such as tutorial, academic advising and counselling, study group activity, academic administration services for students, and organisation of student activities. Regional Offices has central roles in managing, implementing and networking with local partners to ensure the effectiveness of learning support at frontline level, even though policies are set at the Head Office. The aim of systematic learning support in distance education is to facilitate quality student learning process suited to students' learning needs and flexibility, and ensure that students proceed their learning activities through access to various means of learning support.

Keywords: Learning support system; policies for learning support; modes of tutorial services; roles of regional office; academic advising and counselling; academic and administrative services.

CONTEXT AND BRIEF INTRODUCTION TO UNIVERSITAS TERBUKA, INDONESIA

Indonesia is the largest archipelago in the world, stretching more than 5,000 kilometres from the east to the west and more than 3,000 kilometres from the north to the south situated along the South-east Asian equator. Being an island nation, more than 80% of Indonesia is comprised of water, with over 17, 000 islands. The land area of Indonesia contributes only up to the remaining 20% of the total territorial area of the country. Demographically, Indonesia is the fourth most populous country in the world (after China, India, and the United States), with 220.1 million people, an annual population growth rate of 1%, and urban population of up to 47% (UNDP, 2006). According to the most recent *Human Development Report 2006*, Indonesia belongs to the Medium Human Development Rank with per capita income based on the purchasing power parity (PPP) of US\$ 3,609 (UNDP, 2006).

The country represents mosaic of ethnic and regional cultures, with over 1,000 local dialects spoken among different ethnic groups, while Bahasa Indonesia is used as a national language. Unfortunately, Indonesia still has relatively limited communication and information technology infrastructure, with internet users of 67 per 1,000 people (UNDP, 2006).

Universitas Terbuka (UT) is an open university, established in 1984 as the 45th state university to provide opportunity and access to university education, for in-service teachers, working adults and recent high school graduates. UT was founded as a part of the government's national strategies to improve participation in higher education. In 2006, UT enrolled more than 340,000 students, residing in different parts of the country, with over 95% of whom are working adults. UT has major roles to play in developing high-calibre human resources needed for the nation's sustainable development. Since its foundation, UT has enrolled over 1,2 million students and has produced over 600,000 alumni, working in various fields of the profession.

The Government set up UT in 1984 on the grounds that it did not require a large number of scarce full-time academic staff and classroom facilities to teach large numbers of students nationally and simultaneously. It could make use of the resources available in existing universities and other government agencies without necessarily disrupting their major activities. The UT system was considered likely to be economical by the Government and accessible by the students. The UT has been founded to be complementary to the existing higher education system. The target audiences of UT are those opt for distance learning because they have work commitment, reside in locations where there are no access to conventional universities, and they need to have flexibility and freedom from the strict schedules required in classroom-based learning.

Organisationally, the UT is a "management university", whose operations entail networking with participating institutions. It has Headquarters located in Jakarta, and it involves an internal network of 37 Regional Offices providing academic and administrative services for students in their respective regions, with 1,753 tutorial locations, and 671 examination locations. It also involves an external network with the state universities throughout the country for curriculum, course material and test item development as well as for the provision of qualified tutors; with the Post Office and cargo companies for the distribution of course materials; with a major state-owned Bank for the payment of fees; with the television, radio and media network for communication and interaction with students; with regional and state university libraries for access to additional learning resources; and with local educational offices and schools for the administration of practical works and examination. This diverse network requires effective coordination and good communication between the central office, regional centres, and the participating institutions. Effective management is needed through accurate planning, effective networking and partnership, efficient development and delivery of quality programs, and consistent implementation of quality assurance system.

UT students learn from the course materials delivered by the institution and from other learning resources accessible from other institutions. UT has developed multi-media learning packages for the students, which are the printed materials as the major media supplemented with audio cassettes, video programs, computer-assisted instruction, web-based materials and online tutorials.

Learner support is provided to facilitate student learning activities in the forms of tutorials, counselling, study groups as well as administrative services. Students' needs for tutorials are provided and facilitated by regional offices. A variety of tutorial methods have been implemented, namely face-to-face, correspondence, broadcast, and online tutorials. Currently UT has 4 Faculties (Teacher Training and Educational Science; Mathematics and Natural Sciences; Economics; Social and Political Sciences), with 35 Programs of Studies. Additionally, it has a Graduate School offering 3 Masters Programs in Public Administration, Management, and Fishery Management. Masters programs in the field of education are currently under construction. UT media resources for learning includes 117 courses with radio tutorials, 419 courses with online tutorials, and 1002 televised tutorial programs. There has also been increasing uses of multi-media learning materials, in which about 30% of the 962 learning materials are multi-media learning materials (UT, 2007)

The major challenge for UT is to provide quality university education at a distance accessible by students with different level of economic capacity, access to ICT facilities and limited ICT literacy. Since 2002 UT has launched *UT Online* services, aiming at introducing web-based academic and administrative services for students. The web-based academic services consist of online courses and online tutorials while the web-based administrative services includes online counselling and online information dissemination. An online examination system has also been introduced for some courses to facilitate students' flexibility in taking semester examinations. The availability of communication infrastructure is one of the critical aspects in providing online learning services along with the technical skill of the students in using online services. UT has conducted socialisation and training in online learning services to improve ICT literacy of the students.

UT innovation in the use of internet for teaching and learning can be seen as a pioneering initiative in the Indonesian higher education sector, because most of the UT students do not have access to the internet. Although a number of internet cafes have been developed in various regions in Indonesia, access to the internet is considered expensive and difficult for many students living in remote and rural parts and islands of the country. The experiences of UT in the use of internet in distance education might well illustrate the case, in which the use of internet in distance education has insignificant effect on the students. Very few students have accessed the UT online learning services, even though there is no fees charged to the students except for the cost of the internet connection. There has been an increasing trend of the use of online learning services by UT students. ICT uses for teaching and learning have increased in terms of the number of the provision of online tutorials from 377 courses in 2005 to 419 courses in 2006, and the number of access by students from 5,225 students in 2005 to 16,243 in 2006. Other online services of UT includes online dissemination of examination results; online counselling; and online examination (UT, 2006; 2007).

THEORETICAL FOUNDATIONS OF LEARNING SUPPORT SYSTEM IN DISTANCE EDUCATION

The design, development and provision of learning support system for distance students is based on the foundation theories of distance education, i.e., theories of autonomous and independent study, theories of interaction and communication, and the theory of industrialisation (Sewart, Keegan & Holmberg, 1988).

These three classical theories of distance education have been widely referred to during the past few decades, and until today they remain relevant as underlying principles of distance education practice, and these have been further supported and strengthened by more recent theories (Anderson, 2003; Garrison, 2003; Gibson, 2003; Sammons, 2003).

Theories of autonomy and independence lay the basic foundation of distance education practice. Independent study is an effort to organise instruction so that greater freedom in learning is possible for learners. It enables learners to carry out learning tasks and responsibilities on their own pacing and patterns, provide learners with opportunities to continue learning in their own environments, and develop learners the capacity to carry on self-directed learning (Wedemeyer, 1971). Independent learning and teaching can be considered as an educational system in which the learner is autonomous and separated from the teacher by space and time, so that communication is mediated (Moore, 1973). In distance education, learner and teacher is connected by a variety of communication techniques through media. Distance is defined as "a function of individualisation and dialogue", rather than measured in terms of physical proximity. In independent study, learning program occurs separate in time and place from the teaching program, and the learner has an influence at least equal to the teacher in determining goals, resources and evaluation decisions (Moore, 1983). Distance education comprises the elements of learner independence (autonomy), interaction between learner and instructor (dialogue), and certain characteristics of course design (structure) (Moore, 1990). More recent works by Garrison (2003) on self-directed learning, and Gibson (2003) on learners and learning also support these theories.

From the theories of interaction and communication, distance education is viewed as a natural means of instruction, involving two-way communication between the teacher and the student, if they are at a distance from each other (Holmberg, 1967). Distance education includes both real and mediated communication processes, and the purpose of the two-way communication is to motivate and facilitate students in learning and to provide feedback (Holmberg, 1977; 1981). Education is based on communication between teacher and student, and on peer group interaction, and as a method of guided didactic conversation, distance education aims at learning and the conversation facilitates learning (Holmberg, 1983; 1985). Daniel & Marquis (1979) draw our attention to keeping the balance between interaction and independence in distance learning, believing that all learning involves interaction, that is, activities where the student is in two-way contact with another person involving reactions and responses which are specific to the two party's requests. Interaction includes activities such as counselling, tutoring and contacting students; teaching over interactive telecommunication; bringing students together into discussion groups; and engaging in residential gatherings. Independence comprises activities such as studying written material; watching or listening to broadcasts; writing essays and assignments; working alone on a computer; writing essays and assignments; and conducting experiments, surveys and project work at home (Daniel & Marquis, 1979). More recent works by Anderson (2003) on modes of interaction, and Sammons (2003) on teaching and learning also support these theories.

Distance education refers to the industrial management style for its operations. A German scholar, Otto Peters, uses concepts and principles derived from the theories of industrial production to interpret distance education phenomenon, although the comparison is purely heuristic (Peters, 1983). He presents comparative interpretation of industrial production and distance

teaching in terms of the following elements: rationalisation, division of labour, mechanisation, assembly line, mass production, preparatory work, change, objectification, concentration, and centralisation (Peters, 1983; Keegan, 1990). From the point of view of industrial theory, distance education is seen as a rationalised method of providing knowledge which, as a result of applying industrial principles and the extensive use of technology, allows a large number of students to participate in university study simultaneously, regardless of their place of residence and occupation (Peters, 1983). Distance education is the most industrialised form of teaching and learning (Peters, 1989).

The separation of the teacher and learner and the general characteristics of distance education necessitate the provision of an effective learning support system for learners. Distance education institutions employ a variety methods of learning support system, such as residential courses, regional courses, face-to-face tutorials, guided study groups, mediated tutorials, computer mediated communications, internet, and web-based services, depending on the availability of resources and the students' needs, and the institution's capacities. Distance education institutions are confronted with limitations in the use of many forms of learning support for students. For Indonesia, interactive teaching and learning process using new technology remains a major challenge, because of the poor quality of information and communication technology infrastructure. Effort to provide learning support for distance students at UT have been conducted in various ways, such as the establishment of study groups, provision of tutorials and organising of extracurricular activities. Learning support services should then be developed using these theoretical foundations. There are two different approaches to student learning support in distance education. One approach relies on non-contiguous communication, i.e., communication by media, such as written, recorded, broadcasted, and online communication. The other approach includes face-to-face direct as well as mediated contacts. Another form of student support is through counselling and general student support to facilitate students' learning process (Sewart, Keegan & Holmberg, 1988).

POLICIES FOR LEARNING SUPPORT SYSTEM AT UNIVERSITAS TERBUKA

The UT *Strategic Plan 2005-2020* and *Operational Plan 2005-2010* focus on three areas of continuous improvement, i.e.,

- academic quality and relevance,
- access to distance education services, and
- internal management (UT, 2004; 2004a).

To ensure academic quality and relevance, the provision of learning support service is one important area of improvement and development. To ensure improved access to distance education services, areas for development focuses on the following:

- increased number of access points to services,
- improved quality of service,
- improved network of partnership, and
- image building.

In terms of internal management, a comprehensive quality assurance system is implemented as part of the institutional continuous improvement strategies (UT, 2004; 2004a).

The *UT Strategic Plan* and *Operation Plan* provide the underlying policies based on the sound philosophies and strong theoretical foundations of distance education, and they also offer the high spirit of the current best practice and future direction of university activities and initiatives for continuous improvement. Elaboration of the UT Strategic and Operational plans relating to learning support system for distance students is briefly presented in the following (UT, 2004; 2004a).

Learning Support Services

It is obvious that improved access to services is high on priority agenda, and this includes improved access to a variety of learning support services by distance students. Quality learning process goes hand in hand with quality learning support services provided by the institution. The UT learning support services cover both academic and administrative services, in which students can have flexible access to suit their circumstances. Quality learning process takes place when students develop the motivation and self-direction to independent learning. It is the challenge of the institution to design a learning support system which encourages students to initiate learning and develop independent learning culture using a variety of methods and available technology. Improving learning support system can be achieved through systematic and comprehensive services as the following:

- capacity building of student's independent learning,
- facilitation in the development of study groups,
- provision of online, face-to-face tutorial, and written tutorials,
- provision of online system for registration, payment of fees, and purchase of learning materials,
- use of ICT for information dissemination about learning support services,
- improved intensity of academic services.

Increased number of access points to services

UT distance education services have reached all provinces and majority of the districts in Indonesia, and a number of Overseas Support Offices. Enhancing students' access to services is conducted through improving the human resource competencies, enhancing roles and functions of Regional Offices in academic services, increasing the number of access points through the establishment of Study Centres in each of the Districts, and establishing partnership with local internet cafes.

Improved Quality of Services

The quality of service in distance education is judged from by the students' satisfaction. The quality indicator in distance education services can be assessed through accessibility and satisfaction of students. Widening accessibility and improving quality of services can be enhanced through the use of information and communication technology. UT is targeting the establishment of Study Centres in all districts and sub-districts throughout Indonesia.

Improved Network of Partnership

Success in the management of distance education programs depends on the quality service provision of the students' learning needs accurately and timely. Distance education can be a success story through networking and partnership in terms of management activities and academic services. It is important that a distance education institution ensures academic management services such as registration, learning materials development and distribution, learning support services, and assessment of student learning.

Image Building

Distance education can be said as a relatively “new species” in education in Indonesia, and a lot of people might not well understand what it is all about. Distance education introduces a new learning culture within the society, who still lacks the notion of independent and autonomous learning in distance education. The challenge for UT is to build the image that distance education is quality education, and this is done through establishing awareness, disseminating information, and socialising ideas, products, and services of distance education to the stakeholders and general public.

Improved System and Procedure

The UT has fully implemented a comprehensive quality assurance system based on the principles of continuous improvement. The development of policies, systems and procedures has been attempted to coordinate and integrate activities, and achieve efficiency. Systems and procedures are continuously evaluated and revised in response to the dynamically changing needs of the society and technological development. Systems and procedures for learning support system focus on meeting the needs of distance students living in diverse conditions and different circumstances.

Distance education institutions approach learning support system for students differently, depending upon the characteristics of their distance students, the availability of technology, the capacity of the institutions, and the learning cultures and styles of students. Learning support for distance students can be provided in face-to-face mode and mediated mode, such as through printed material, telephone, audio/video, radio, television and computer. The forms of learning support services to distance students can be categorised academic and non-academic support. Generally, academic support is provided to facilitate the development of cognitive, knowledge and learning skills aspects of the course. The non-academic support is provided to help the development of students’ affective areas, advising and the administrative assistance to facilitate the students’ learning process. The following elaborates the UT learning support system.

TUTORIALS AS ACADEMIC SUPPORT SERVICES FOR DISTANCE STUDENTS

Academic services for distance education include tutorial services and study group activities. UT tutorial services include face-to-face and mediated tutorials. The mediated tutorials include written, online, radio and televised tutorials. Face-to-face tutorial is a kind of learning support involving face-to-face sessions between a tutor and students. Mediated tutorial is kind of tutorial support involving the use of media, such as radio, television, telephone, internet or written. Face-to-face tutorials are organised by Regional Offices, while mediated tutorials are managed from the Headquarters, and they are supported and can be implemented through the Regional Offices. Distance students are encouraged to actively participate in study group activities, which can be initiated by the students themselves. These study group activities are supported and facilitated by Regional Offices, such as through the provision of study location in Regional Office, networking with local institutions, and provision of qualified tutors and supervisors.

Face-to-Face Tutorial

Face-to-face tutorials are provided on compulsory and voluntary bases, depending the characteristics of the courses. Student attendance and participation in tutorial

sessions vary, but the number of participating students in voluntary face-to-face tutorials tended to decrease in the past. Since 1998, UT has attempted to encourage the use of face-to-face tutorials through the provision of a funding scheme for Regional Offices to conduct tutorials. The tutorial funding scheme has been intended as capacity building to improve the quality of tutorial services in the Regional Office. Some Regional Offices have proved themselves that they have the capability to conduct tutorials on their own, without funding support from the Head Office. Since 2001, funding allocation for tutorial has been discontinued, and students have to finance themselves if they need tutorial support services, and Regional Offices are responsible for the financial management of the tutorial support.

To strengthen the tutorial system, UT has re-designed the face-to-face tutorial support with specific characteristics as the following. Face-to-face tutorial sessions are held 8 times in one semester. During the 8 tutorial sessions, tutors give 3 assignments to students, each of which in sessions 3, 5 and 7. These assignments must be completed during the tutorial sessions and the tutor will evaluate, give feedback and score. Assignment and participation scores in tutorials contribute up to 35% to the final semester grade of the course. Participation score includes the number of student activities and attendance during the tutorial session. Tutors are borrowed from the local state university, with at least a Bachelor degree, and accredited as UT Tutor through a number of training programs, such as Tutor Accreditation Program, Instructional Technique Basic Skill Development Program, Applied Approach (AA), or Regional Tutor Upgrading. Tutorial sessions are held in locations in the vicinity of Regional Offices. Exceptions for special arrangement can be given to specific cooperation programs. Tutorial expenses, including learning materials expenses, are fully paid by students, except for the Primary Teacher Training Program, in which fees include tutorial expenses.

The management of face-to-face tutorials, including planning, recruitment of tutors and students, organising and evaluation are under the responsibility of Regional Office. As part of quality assurance to standardise tutorial services, a Manual of Conducting Face-to-Face Tutorial has been published as guideline and this manual has been evaluated, revised and improved continuously based on feedback from students and tutors. Socialisation of tutorial service provision has been done using a variety of methods, such as sending memorandum to Regional Offices, poster, announcement through radio network, and sending leaflet directly to students. Besides, dissemination of information about tutorial is also given during the New Student Orientation Program, in study group activities, and the UT website.

Written Tutorial

Written tutorial uses correspondence by post or other means of written communication in the delivery of tutorial materials, assignments and responses to students' questions. The tutorial materials can be sent directly to students, via Regional Offices, or through mass media. Since the beginning of UT operations, written tutorial has been offered to students, emphasising on answering students' questions, and has been conducted throughout the semester. But the trend was like the face-to-face tutorial, in which the students' interests in participating in the written tutorial tended to decrease in the past. To encourage students' participation in written tutorial, a new strategy has been introduced since the year 2000, in which written tutorial has been categorised into three models. One model is based on students' questions to tutors. The second model is based on the tutor's initiative to send tutorial materials or assignments directly to students. In the third model, tutors send out tutorial materials and assignments to Regional Offices for further

distribution to students on requests. To reach more students, tutorial materials are also published in mass media at institutional, national and local media. Regional Offices actively establish cooperation and partnership with local newspapers to facilitate the dissemination of written tutorial materials through local newspapers, and news bulletins and magazines issued by students or study groups (Wardani, 2003).

The second model of written tutorial which involves the delivery tutorial materials and assignments directly to students has been more often used. The students are expected to read the tutorial materials, answer the questions, and work on assignments. These student's responses are then returned to the Faculty by post for feedback to students. One of the major obstacles in conducting the written tutorial by correspondence is that it is time consuming for tutors to give feedback for a large number of tutorial responses received from students. The correspondence tutorial process also takes time because there are multiple correspondences from tutors to students, from the students' responses to tutors, and the tutors' feedback to students. There can only be a maximum of two initiations for written tutorials by correspondence in a semester. This condition is insufficient to provide effective learning support to distance students, and alternative tutorial modes need serious considerations for effective implementation.

Tutorial by Radio

Radio is an alternative media which is relatively cheap and has high accessibility all over Indonesia. Although its coverage can be limited, this media has been used by UT since the beginning of UT operation, once a week for a duration of 25 minutes in the state-owned national radio network *Radio Republik Indonesia (RRI)*. Since the year 2000, the radio tutorial sessions have been broadcast twice a day from Monday to Saturday, and each broadcast has a duration of 25 minutes. Apart from that, UT working together with the Regional Offices have developed partnership with local commercial radio stations for radio tutorial broadcast in each of the respective region. Until now UT has produced 1,884 radio programs ready for broadcast at any time. This kind of media needs more optimal utilisation, considering its relatively easy access by distance students. The UT has prepared six months broadcast schedules sent to students directly, and put into the University website for easy access by students.

Tutorial by Television

Television can be used effectively, as this media has capability to present audio-visual information with easy and simultaneously wide access by students. Due to unfavourable factors relating expensive cost and time consuming in developing television programs and dependence on television network for broadcast, UT uses television as supplementary media for student learning. Since the beginning of UT operation up until 1998, televised tutorials were broadcast by a state-owned national television network *Televisi Republik Indonesia (RRI)* once a month every 15.30 hours, and then also by *Televisi Pendidikan Indonesia (TPI)* four times a month every 23.00 hours. Both television programs were discontinued due to the networks' policies. Then, since 2000, the UT television tutorials are broadcast by a commercial cable television *Quick Channel (Q-channel)* for 60 minutes on a daily basis every 6.00 hours, and since 2004, also by a newly established educational television network of the Department of National Education *Televisi Edukasi* for 30 minutes on a daily basis every 9.30 hours. So far UT has produced 504 televised programs ready for broadcast.

Online Tutorial

From 2002 until 2004, a new mode of tutorial, i.e., online tutorial, was introduced using the Manhattan Virtual Classroom (MVC) software. Then since 2004, the MVC-based online tutorial has been replaced by the Moodle software, which has more facilities and features compared to the MVC software. Online tutorial is designed for a period of 8 weeks in one semester, and the tutor has to present online initiation materials to students every week. The tutor gives three assignments during one semester, on week 3, 5 and 7 respectively. These assignments then are submitted to tutor for feedback and scoring. The assignment and participation scores contribute up to 15 % to the final semester grade of the course. In this case, participation is defined as the level of students' interactive activities during the online tutorial.

Online tutorial is compulsory requirement for all post-graduate courses, and it is integrated with the face-to-face tutorial mode. However, it is voluntary for most of the undergraduate courses. Online tutorials have not yet got reasonable responses from undergraduate students, as it is indicated by the low number of students using these online tutorial facilities. Data shows that only about 3% of UT students utilise online tutorial services. The students' constraints to actively engage in tutorials are attributed to factors relating to the cost of internet access and the limited accessibility to internet due to the poor quality of information and technology infrastructure in Indonesia. During the second semester of 2006, there were 377 courses supported by online tutorials, and 16,243 students accessed these internet-based tutorial services (UT, 2007).

EXTRACURRICULAR ACTIVITIES AND ADMINISTRATIVE SERVICES FOR DISTANCE STUDENTS

UT students have specific characteristics of distance education as the following (Wardani, 2003). Students are not concentrated at certain campus-based location, but they are spread out throughout the country and outside the country. Possibilities for face-to-face communication and interaction are limited. Around 95% of the students are employed, and therefore the time spent for studying and participating in students' learning and extracurricular activities are also limited. The age of the students are spread out from 18 years and older, and there are no limitations for taking Open University studies in terms of age. The educational backgrounds of the students vary from high school until post-graduate and doctoral degree qualifications, and there is no limitation as regards educational backgrounds and qualifications to attend open university studies. The social and economic backgrounds of the students are diverse, from the low, middle to high income groups of the society. These unique characteristics have implications on the opportunities and constraints for participation in extracurricular activities. The student's extracurricular activities can be grouped into four categories, i.e., new student orientation, academic development activities, student interest activities, student financial aid programs, and academic advising and counselling.

New student Orientation

A new student orientation is held after registration period is closed, in March and September. New student orientation is under regional office responsibilities in cooperation with study groups and alumni. New student orientation is held for one day with the main objective to introduce UT services in general, including the special characteristics of UT distance learning system, registration and examination regulations, learning materials, learning support, extracurricular activities, experiences of alumni, and establishment of study groups.

Academic Development Activities

Academic development activities are aimed at improving students' capabilities in critical reasoning, argument, and creative thinking. The activities include scientific discussions, stadium general, paper writing contest, student creativity program, and student achievement award. Conducted in Regional Offices, scientific discussion takes the forms of seminars or panel discussion, while stadium general usually involves guest professors and experts, and are intended to give students the opportunity to interact directly with the expert guest speakers, staff of the Regional Office, and their peer groups.

These activities can serve as promotional tools for the institution, and as social tools for students. The academic paper writing contest and student achievement award are annual programs organised by the Directorate General of Higher Education (DGHE).

To participate in these programs, students are requested to write scientific papers for assessment by the DGHE. One major obstacle in conducting these contests is the lack of students' interests and difficulties in communicating these opportunities to students. Student creativity programs are also held by the DGHE. Students are requested to form a creative group consisting of 3 to 8 persons and submit a proposal in research, technology application, entrepreneurship, civil services and scientific paper. The winning group will be awarded gold by the DGHE Office.

Development of Student Interest Activities

These activities take the forms of discussions, seminars, sports, arts, journalistic, and social activities conducted in Regional Offices. Students can also take part in scientific activities, sports, and arts conducted by the local university and government institutions, as well as in provincial and national events. A group of Regional Offices in the nearby region can work together to organise such activities, so that students can stay in touch with their peers from other Regional Offices in the nearby regional area.

Student Financial Aid Programs

The development of student aid programs focuses on the award scholarship to achieving students. The award of scholarship is intended for non-working active students meeting particular criteria, such as a minimum Grade Point Average (GPA) of 2,75, and completion of at least 60% of the credits of the Study Program. This award of scholarship is intended to help students who need it and motivate students to have high academic achievement.

Academic Advising and Counselling

UT academic staff in the Head Office and Regional Office have academic advising and counselling roles. They respond to students' enquiries face-to-face and mediated by mail, telephone, and online. An important counselling role is to motivate students in their learning effort and improve their academic achievement. Some students may need academic advice regarding the courses that they would like to take in the following semester. Other students may also need solution of their academic administration problems.

IMPLEMENTING LEARNING SUPPORT SYSTEM FOR DISTANCE STUDENTS AT THE REGIONAL OFFICE

Working together with Regional Office, the Headquarters have developed policies, systems and guidelines for implementation by all Regional Offices. Each of the

Regional Offices has unique characteristics in terms of the types of students and the cultures within which it operates. Regional Offices have the responsibility that policies, systems and procedures can be effectively implemented with the ultimate goal of satisfying students' needs and expectations. Major activities of the Regional Office are elaborated in the following.

Development of Study Groups in Regional Office

The development of study groups is intended to facilitate students' group learning through peer interaction and communication in various academic activities that enhance learning process. The Head Office and Regional Offices work together closely to support study groups. The Headquarters sets policies for development of programs for the study groups, and the Regional Offices implement the programs and provide feedback to the Head Office regarding needs and problems that arise during implementation stage. Monitoring and evaluation is conducted jointly by the Head Office and Regional Office to improve the quality of study group programs. The Regional Office has direct roles in taking care of the study group activities. Students have to be well informed about the roles and functions of the study group and how they should take benefit of participation in the study group activities. These study groups are facilitated by the Regional Office in terms of the provision of qualified tutors, tutorial facilities, learning materials and partnership with the local state university, regional library, alumni group, and other institutions. The Regional Office monitors study group activities in line with the University policies and guidelines. Study group activities have important roles to help improve the students' learning achievement. Their existence needs to be maintained and supported in order to serve its functions effectively. The Regional Offices play active roles in conducting socialisation about the student development programs, and study group activities. One form of support to the study group is to establish a membership network of the study group as well as a network of study groups in which members can interact and communicate easier. The study groups are also encouraged to share learning resources together to facilitate students' learning. The study group activities should be directed to motivate the students' group and independent learning. Students are encouraged to work together closely and are willing to share information about the UT, so that they know more about the institution's services. The study group has constructive psychological effects that encourage them to develop rapport, establish a community of learning, and get involved in intensive academic and social interaction. It is important that these study groups develop activities that enable them to manage and sustain themselves through partnership with the Regional Office and the local institutions.

Academic services for distance students

Managing tutorial services for distance students

The different characteristics and needs of distance students have implications on the type of tutorial modes that they prefer. For the Primary Teacher Training Program, the UT has designed face-to-face tutorial programs which require compulsory attendance for some of the courses. Whereas for other programs of studies, the students have a variety of tutorial modes to choose from. Principally, for voluntary tutorials and requested tutorials, UT students prefer the face-to-face tutorial mode, even though some students opt for other tutorial modes, such as written and online tutorials. The management and implementation of the face-to-face tutorial is the responsibility of the Regional Office, following the operational systems and procedures set up by the Headquarters.

Conducting face-to-face tutorials in Regional Office involves the following steps. The first step is the identification of courses for face-to-face tutorials. For the Primary Teacher Training Program, this step is relatively simple because the courses for tutorials have been set up in the curriculum. The Regional Office notify students about the availability of courses with face-to-face tutorials during registration period. The final decision about the actual courses with tutorials is based on the number of students registered for participation in the courses with tutorials. The second step is the tutor recruitment process. Tutors are recruited from the local state university following the guidelines and criteria set by the Headquarters. The Primary Teacher Training Program requires a large number of tutors, because of the large number of students attending the compulsory tutorial requirements. Tutorials for these groups of students are conducted in Study Centre locations within easy access by students, many of which in the district and sub-district areas. Face-to-face tutorials for other programs of studies are mostly conducted in Regional Offices. The Regional Office may have the responsibility of managing at least 5 to 20 districts, and one district may consist of 10 to 40 sub-districts.

Good cooperation between the Regional Office and the local state university facilitates the tutor recruitment process. Accurate prediction of the number of students participating in the voluntary tutorial courses is needed to determine the exact numbers of tutors needed from the partner university. The exact number of tutorial participants can be more precisely calculated during the new students' orientation program held in the beginning of the academic semester. For the Primary Teacher Training Program, the number of tutors recruited mostly depends on the identification of the number of study centres after the registration process is finalised. The placement of tutors in study centres needs careful consideration. Most of the tutors prefer to conduct tutorial sessions in their own home towns, instead of spending more time to travel to more remote places.

The third step is coordination meeting with tutors and institutional partners in the Regional Office. This coordination meeting is conducted to make the necessary preparation for the tutorial activity during the semester. In this meeting, evaluation results of tutorial activities in the previous semester are communicated, from which lessons can be learnt, mistakes can be prevented, and future practice can be improved. Then the final schedule for tutorial sessions for each of the courses and the readiness of each district to conduct the tutorial activities are confirmed. In certain conditions, a preliminary meeting can be conducted between the Regional Office and local partners prior to coordination meeting involving the tutors, so that scheduling can be finalised during this stage, and then is informed to tutors and students for effective implementation. Coordination meeting with tutors is important in order that they have sufficient understanding of the distance education system, characteristics of distance students, tutorial mechanism, and they have similar perception about how tutorials are to be conducted.

The fourth step is implementing the tutorial schedule. The real tutorial activities should have consistencies with the planned Tutorial Activities Design (TAD), and this is continuously evaluated for improvement. The evaluation results are communicated to tutors involved in the following semester to ensure that improvement takes place.

Ensuring learning process through face-to-face tutorial

As stated before, the mechanism of face-to-face tutorial is designed to include 8 sessions with 2 hour duration for each session and three assignments during session 3, 5, and 7 respectively. Learning materials are distributed to students before tutorial

activities begin to allow for sufficient preparation before attending to the tutorial sessions. A staff of the Regional Office is assigned to provide administrative support for the tutorials, such as preparing the student attendance list, session agenda, learning facilities, and copies of tutorial assignments and answer sheets. The staff has the responsibility to manage the tutorial process to ensure a conducive learning environment for both tutors and students. A full report on the implementation of tutorial is submitted to the Head of Regional Office for further actions and feedback for the coming tutorials. During the tutorial activities, staff also provides counseling to students if it is needed. At the end of the tutorial session the staff has to collect all tutorial documents, students' assignment marks, and settle the financial administration for both tutors and the local study centre officers.

Supporting and monitoring mediated tutorials

Mediated tutorials are designed, developed, implemented and evaluated by the Headquarters. The Regional Office has the support and monitoring roles in implementation of mediated tutorial, such as informing students about these tutorial services, handling students' difficulties in participating in these tutorials, responding to students' enquiries, and counseling and advising students on follow-up of these tutorials when they encounter learning problems.

Facilitating written tutorial

Regional Offices receive assignments for students from the Head Office. These assignments are then distributed to students during the registration process together with the explanation about written tutorial procedures. After completing these assignments, students are requested to directly send them to the Faculty in the Head Office for further processing and feedback. The Regional Office facilitates the distribution of written tutorial assignments to students in their respective regions. It is important to note that starting in the year 2007, written correspondence tutorials are replaced by online tutorials.

Facilitating online, radio and televised tutorials

The online tutorial procedures are managed by the Headquarters. The role of the Regional Office is to help students when they find difficulties in getting access to the internet. Students have access to the *UT Online* tutorial menu with individual passwords. Difficulties in access to online tutorial are due to the low quality of telecommunication infrastructure and facilities, the students' inability to operate computers, and the slow response from the computer system. These constraints have discouraged students to pursue interests in participating online tutorial. The radio tutorial schedule is organised by the Head Office and distributed to students during the registration process. There are difficulties in following up and controlling this tutorial activity because there is no report from students regarding their participation. It is difficult for students to participate in televised tutorial since this kind of tutorial is broadcast in non-regular cable television channel. For students who want to participate in this kind of tutorial, they have to buy additional communication facilities that are relatively expensive. The Regional Office has to make further effort to encourage students to participate in this kind of tutorial.

Administrative services for distance students

Academic advising and counselling

Academic advising and counseling services are provided before the enrolment period, starting with the pre-enrolment counseling. Within this period students are given information relating to courses offered with their prerequisites, the time span to study, consideration on available time for studying, and the guidance to follow

correct enrolment process. Academic guidance on individual basis is given to students during the working hours to help their understanding of certain content of the courses while these courses are not provided with tutorial services. If there is no academic staff available in the Regional Office, then students are connected to the faculty member of the Head Office or local state university. Similar treatment is also given for students who fail in the semester examination several times in certain courses.

Academic administration services for students

Similar to academic services and counseling, the academic administration services are provided before the enrolment period, starting with the pre-enrolment counseling. Students prefer to come to the Regional Office to have academic administration services rather than using communication facilities. Most of the students' academic administration problems begin in the registration process which can have effects on failure to attend the examination. For instance, the students' names do not show up on the examination attendance list. The wrong courses show up on the attendance examination list. The students' examination marks do not show up especially for courses which have prerequisites and practical requirements. To cope with these problems the Regional Office staff will collect required documents and send them to the Head Office for further processing and feedback.

New student orientation

Students' success in distance education depends on their self-directed learning readiness, so the theme of new student orientation is focused on this issue. For most of the programs of studies, the new student orientation is held in the Regional Office one week after the registration period ends. Guest lecturers from the local state university or from UT Headquarters are invited to give a stadium general to new students to ascertain topics relating to the key success factors in learning at a distance. Furthermore, general information about student learning support services, learning material services, registration and examination services are also provided by relevant Coordinators of the Regional Office. Since the programs of study chosen by students vary, academic rules and information are provided for each group of students based upon their programs of study to enhance their understanding of the academic rules of the programs. Study groups are further categorised according to the programs of study and residential locations for supervision by the Regional Office. For the Primary Teacher Training Program, the new student orientation is held in each district and involves the local government as the organising committee. Since the Primary Teacher Training Program only consists of three programs of studies, the new student orientation is focused on academic rules of these three programs. General information relating to UT policies on improving the quality and professionalism of kindergarten and elementary school teachers is provided by the Head of Regional Office. Specific information about the academic administration rules relating to course registration, learning process, and examination process are presented by the Regional Office Coordinator and staff responsible for student services at the local district. The speech from the Head of Local District Government stresses on local government commitment to enhance the quality of human resources especially for elementary teachers. Most local governments offer scholarship award, but only a limited number of teachers can get the award due to the limited budget allocated for this purpose.

Academic development activities

Managing academic development activities for the Primary Teacher Training Program is relatively easier than for other programs of studies, because the former is

structurally under the organisational support of the Local District government. The Regional Office staffs encourage students to be involved in such activities, and study groups can be established based on the district area. However, these opportunities are not intensively utilised by the students, because of their lack of motivation to involve themselves in these academic development activities. Only a small number of students participate in these activities, conducted regularly in the forms of scientific discussion groups, academic writing development and student creativity program. To motivate students, competition events have been periodically conducted. Regional Office staffs are appointed to supervise the students' academic development activities. Local experts or senior tutors are also invited to supervise students intensively as part of the preparation for the competition at institutional and national levels. For academic writing development, students are guided by academic staff of the Regional Office. Their papers are then presented to their peers and the Regional Office staff. Having the ability to write academic papers is an important exercise for students to help them in succeeding in the essay-type examination questions. In terms of the student creativity program, the Regional Office provides facilities to support the students' initiatives. The challenge for the Regional Office is to encourage more students to get more actively involved in such activities.

Development of student interest activities

The continuity of activities of student discussions and seminars is difficult to maintain since only a few students get involved in this activity. For the Primary Teacher Training Program, the students' activities are conducted in their local districts, while for students of other programs these activities are conducted in the Regional Office. The Regional Office staff work together with students to determine topics for discussion, relating to the courses taken by students during the semester. These topics then can be presented in certain events, such as in regional forum for academic discussion, sports competition activities, and arts competition. In contrast to the situation mentioned above, the sports and arts activities are running well especially for most programs of studies. Students practice sports and arts periodically by themselves. The facilities where students conduct such activities are usually owned by the local government and they can be used at no charge by UT students. Every district has special characteristics and quality of sports and arts. Therefore, it is not difficult for the Regional Office to choose athletes and artists when the competition is held. Sports and arts competitions are conducted both at regional and district levels periodically once every three years. Events at the district level are conducted as a preparation for further competitions at regional and national levels.

Financial aid programs for students

In order to get scholarship and offer financial aids for its students, the Regional Office conducts several activities. For most of the study programs, program proposals are sent to the local government, followed by meeting with the top local decision maker. Getting the scholarship for the Primary Teacher Training Programs is much easier than for most other programs, as the majority of students in the Primary Teacher Training Programs are local government employees, sponsored by the local governments to study at UT as part of their strategic human resource development policies. The local government has strong commitment in improving the quality of human resources to. For students of most study programs, those students with the highest grade point average are proposed to get the scholarship or financial aids from the Department of National Education through the UT. The proposals for getting financial aids for UT students are sent to several relevant institutions at local, provincial and national levels.

Constructive Effects of Learning Support Services on Student Learning Success

Effective learning support system has constructive effects on student learning success in distance education. The followings elaborate how learning support system have significant implications on students learning based on the UT experience.

Enhancing learning

Effective learning support enhances student learning (Zulkabir & Thaib, 2003). Learning takes place in various format and modes. Students are motivated to learn through peer interaction, working on assignments, and interacting with tutors and peers. Distance students are well informed about the variety of learning support system from which they can choose to suit their needs and circumstance. This information is disseminated from the Head Office, through the Regional Offices, and via the website accessible by students. In this way, students can plan their learning activities and follow up learning opportunities provided by the institution.

Motivating students to learn

Distance students are provided with diverse learning opportunities and activities in order to motivate them to learn. They are encouraged to actively engage themselves in various learning opportunities through study groups, tutorial sessions conducted in the face-to-face mode and the distance mode. The learning material are designed systematically to encourage independent learning through clear objectives, description of concept and examples, use of cases, self-assessment exercises, formative and summative evaluation. The learning support system is designed to motivate students' learning in various ways using various modes and means. Students develop the motivation and willingness to learn (Darmayanti, 2002).

Encouraging learning interaction

The sharing of learning experiences in distance education takes place through various forms of learning interaction, social interaction, learner-tutor interaction, peer interaction and learner-content interaction (Anderson, 2003). The provision of various learning support services facilitate constructive student learning interaction that eventually develop students' knowledge and abilities through distance education (Karnedi, 2002).

Providing varied learning strategies

Distance students develop a variety of learning experiences through the use of a variety of learning strategies, styles and media (Julaeha, 2002). They are exposed to different kinds of learning support system provided by the institution. Distance students learn in group, on individual bases, through scheduled learning activities, and on autonomous learning basis. Effective learning support system should direct students on how to study the learning materials, how to answer self-assessment questions, how to work on assignments, and how to go through the tough requirements of distance learning successfully.

Promoting independent learning

Distance education is based on learner self-direction and independent learning, conducted in group as well as on individual basis. An important task for the institution it to ensure that the following learning requirements take place. The institution should effectively motivate students to learn, direct tutors to develop assignments, develop learning activities for students to follow up tutorials and group interaction, and design the learning materials in such a way that enhances independent learning (Harsasi, 2002).

Distance education develops constructive learning culture through learner self-direction and independent learning habits (Puspitasari, 2003).

Improving learning output and outcome

Institutional studies conducted at UT shows that effective learning support improves learning output and outcome, in terms of improved grades, graduation rate, mastery of learning materials, improved skills and competencies (Wardani, 2002).

Graduates of distance education institutions have survived the tough academic training that has required independent and autonomous learning process. So the graduates can develop themselves to become independent professionals and effective facilitators in any learning organisation (UT, 2005).

CONCLUSIONS

The provision of learning support system is crucial to ensure student learning success at a distance.

It is important that distance education institutions implement effective learning support system for students that suit their needs, characteristics, accessibility, availability of technology, institutional capacity, learning cultures and styles. Learning support for distance students can be provided in face-to-face mode and mediated mode.

The forms of learning support services to distance students vary, and they can be generally categorised into academic and non-academic support. There are constructive effects of effective learning support system for distance students, such as enhancing learning and motivation to learn, improving peer interaction, providing opportunities for varied learning strategies, encouraging independent learning, and enhancing learning output and outcome.

BIODATA and CONTACT ADDRESSES of AUTHORS



Aminudin ZUHAIRI is Senior Lecturer in distance education and Head of Quality Assurance Centre at Universitas Terbuka (UT), Indonesia. Previously he held various positions at UT, including Assistant to the Rector (2001-2003), Secretary of the Institute of Research (1998-2000), and Head of English Language Education Program (1995-1997).

He holds a *Bachelor of Education* from *Teacher's College (IKIP) Semarang, Indonesia*; a *Master of Education* from *Simon Fraser University, Canada*; a *Doctor of Philosophy* from *University of New England, Australia*; a *Graduate Certificate in Quality Assurance* from *University of Twente, Netherlands*; and a *Certificate of Leadership* from *United Nations University International Leadership Academy (UNU/ILA), Jordan*.

Aminudin ZUHAIRI PhD

Universitas Terbuka, INDONESIA.

Quality Assurance Centre, Jalan Cabe Raya, Ciputat,
Tangerang 15418, Indonesia;

Fax. +62 21 7434791; Tel. +62 21 7490941, extension 2420.

Email: aminz@mail.ut.ac.id



Irma ADNAN is Assistant to Vice Rector Academic and Senior Lecturer in industrial psychology and human resource management at the Faculty of Social and Political Science at Universitas Terbuka (UT), Indonesia. Previously she was Assistant to Vice Rector Operations and Student Affairs (2001-2005). She holds a *Bachelor of Psychology* from *Universitas Padjadjaran*, Bandung, and a *Master of Science* in Industrial and Organisational Psychology from *Universitas Indonesia* in Jakarta. Her research interest is in learning support for distance students, industrial psychology and human resource management.

Irma ADNAN

Jalan Cabe Raya, Ciputat,
Tangerang 15418, INDONESIA;
Universitas Terbuka,

Fax. + 62 21 7434290; Tel. + 62 21 7490941, extension 1107.

Email: irmaadn@mail.ut.ac.id



Dina THAIB is senior lecturer in mathematics at the Faculty of Mathematics and Natural Science at Universitas Terbuka (UT), Indonesia. She is responsible for learning support services and cooperation in UT Regional Office, Bandung in West Java. Previously she was responsible for cooperation and human resource development. She holds a *Bachelor of Mathematics* from *Institut Teknologi Bandung*, and a *Master of Education* from *Simon Fraser University*, Canada.

Currently she is also a Doctoral candidate in Educational Administration in *Universitas Pendidikan Indonesia* in Bandung. Her research interest is in learning support system for distance students and distance education management.

Dina THAIB

UPBJJ-UT Bandung;

Jalan Raya Cibiru Km. 15, Bandung 40393,
Universitas Terbuka, INDONESIA.

Fax. + 62 22 7801792; Tel. + 62 22 7801791.

Email: dinath@cbn.net.id

REFERENCES

Anderson, T. 2003. Modes of interaction in distance education: recent developments and research questions. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education*, pp. 129-144. Mahwah, NJ: Lawrence Earlbaum.

Daniel, J. & Marquis, C. 1979. Interaction and independence getting the mixture right. *Teaching at a Distance*, Vol. 14, pp. 29-66.

Darmayanti, T. 2002. Kemauan belajar mahasiswa pendidikan jarak jauh: studi kasus di Universitas Terbuka [Student learning volition in distance education: a case study at Universitas Terbuka] . *Jurnal Pendidikan Terbuka dan Jarak Jauh [Journal of Open and Distance Education]*, Vol. 3, No. 1.

Garrison, D. R. 2003. Self-directed learning and distance education. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education*, pp. 160-168. Mahwah, NJ: Lawrence Erlbaum.

Gibson, C. C. 2003. Learners and learning: the needs for theory. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education*, pp. 147-160. Mahwah, NJ: Lawrence Erlbaum.

Harsasi. 2002. *Studi partisipasi dan kemampuan belajar mandiri mahasiswa peserta tutorial tatap muka rancangan khusus masa registrasi 2002.1 di UPBJJ-UT Surakarta [A study of participation and independent learning capacity of students participating in specially designed face-to-face tutorials during the 2002.1 registration period at Regional Office of Surakarta]*. Unpublished research report.

Holmberg, B. 1967. *Correspondence education a survey of applications, methods and problems*. Malmö: Hermonds NKI.

Holmberg, B. 1977. *Distance education a survey and bibliography*. London: Kogan Page.

Holmberg, B. 1981. *Status and trends of distance education*. London: Kogan Page.

Holmberg, B. 1983. Guided didactic conversation in distance education. In D. Sewart, D. Keegan & B. Holmberg (Eds.), *Distance education international perspectives*, pp. 114-122. London: Croom Helm.

Julaeha, S. 2002. Memahami gaya dan strategi belajar mahasiswa [Understanding students' learning style and strategy]. *Jurnal Pendidikan Terbuka dan Jarak Jauh [Journal of Open and Distance Education]*, Vol. 3, No. 2.

Karnedi. 2002. Tutorial elektronik dan peningkatan kemampuan menulis dalam Bahasa Inggris [Electronic tutorial and improvement of writing capacity in the English language]. *Jurnal Pendidikan Terbuka dan Jarak Jauh [Journal of Open and Distance Education]*, Vol. 3, No. 2.

Keegan, D. 1990. *The foundations of distance education*, 2nd ed. London: Routledge.

Moore, M. G. 1973. Toward a theory of independent learning and teaching. *The Journal of Higher Education*, XLIV(9):661-679.

Moore, M. G. 1983. *On a theory of independent study*. In D. Sewart, D. Keegan & B. Holmberg (Eds.), *Distance education international perspectives*, pp. 68-94. London: Croom Helm.

Moore, M. G. 1990. Recent contributions to the theory of distance education. *Open Learning*, Vol. 5, No. 3, pp. 1-6.

Peters, O. 1983. Distance teaching and industrial production a comparative interpretation outline. In D. Sewart, D. Keegan & B. Holmberg (Eds.), *Distance education international perspectives*, pp. 95-113. London: Croom Helm.

Peters, O. 1989. The theory has not melted further reflections on the concept of industrialisation and distance teaching. *Open Learning*, Vol. 4, No. 3, pp. 3-8.

Puspitasari, K. A. 2003. Kesiapan belajar mandiri mahasiswa dan calon potensial mahasiswa pada pendidikan jarak jauh di Indonesia [Independent learning readiness of students and potential students of distance education in Indonesia]. *Jurnal Pendidikan Terbuka dan Jarak Jauh [Journal of Open and Distance Education]*, Vol. 4, No. 1.

Sammons, M. 2003. Exploring the new conception of teaching and learning in distance education. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education*, pp. 387-397. Mahwah, NJ: Lawrence Erlbaum.

Sewart, D., Keegan, D. & Holmberg, B. 1988. *Distance education international perspectives*. London: Routledge.

UNDP. 2006. *Human development report 2006*. New York: United Nations Development Program.

UT. 2004. *Rencana strategis Universitas Terbuka 2005-2020 [Strategic plan of Universitas Terbuka 2005-2020]*. Jakarta: Universitas Terbuka.

UT. 2004a. *Rencana operasional Universitas Terbuka 2005-2010 [Operational plan of Universitas Terbuka 2005-2010]*. Jakarta: Universitas Terbuka.

UT. 2005. *Buku I Portofolio Universitas Terbuka [Book I Portfolio of Universitas Terbuka]*. Unpublished document.

UT. 2006. *Laporan tahunan Rektor Universitas Terbuka 2005 [Annual report of Rector of Universitas Terbuka 2005]*. Unpublished document.

UT. 2007. *Laporan tahunan Rektor Universitas Terbuka 2006 [Annual report of Rector of Universitas Terbuka 2006]*. Unpublished document.

Wardani, I G. A. K. 2002. *Kinerja guru lulusan program penyeteraan D-II PGSD Guru Kelas Kurikulum 1996 [Performance of graduate teachers in in-service teacher training D-II Program for Classroom Teachers Curriculum 1996]*. Unpublished research report.

Wardani, I G. A. K. 2003. *Memorandum akhir jabatan Pembantu Rektor Bidang Kemahasiswaan Universitas Terbuka 1999-2003 [Memorandum of the end of term Vice Rector Student Affairs of Universitas Terbuka 1999-2003]*. Unpublished document.

Wedemeyer, C. A. 1971. Independent study overview. In L. C. Deighton (Ed.), *The encyclopaedia of education*. New York: Macmillan.

Wedemeyer, C. A. 1981. *Learning at the backdoor reflections on non traditional learning in the lifespan*. Madison: University of Wisconsin Press.

Zulkabir, H. & Thaib, D. 2003. Pengaruh tutorial remediasi dalam meningkatkan jumlah kelulusan matakuliah [Effect of remedial tutorial to improve the number of course pass rates]. *Jurnal Pendidikan Terbuka dan Jarak Jauh [Journal of Open and Distance Education]*, Vol. 4, No. 2.