

**CONTRIBUTION OF DISTANCE TEACHER TRAINING  
TO NATIONAL QUALITY EDUCATION  
(Siti Julacha, Andayani, Dewi A. Padmo, and Paulina Pannen)**

*Abstract*

Universitas Terbuka, through its Faculty of Education, since its inception in 1984, has been involved in providing in-service training programs for teachers of various fields all over Indonesia. Up to present, there has been around 510,000 students graduated from the programs. This paper discuss some aspects of the programs, including the program model, the operational system, and the relevance of the program toward the teaching quality improvement in Indonesian schools as perceived by the teachers. In addition, the challenges faced by the program, i.e., globalization and internationalisation, pressing national demand for quality teachers, and the changing paradigm of discussion will also be discussed.

**The Portrait Of Teacher Educatio in Indonesia**

On the institution perspective, teacher education in Indonesia had been changed and developed at the certain period of time. Begin at the Netherland colonization time, it were 2 kinds of teacher education. First, teacher education in pre-service training program that was 2 and 4 year study after 5 year lower school (sekolah rendah). This kind of education was prepared for to be a 3 year village school teacher and number 2 elementary school teacher (guru sekolah dasar nomor 2) that was purposed to Indonesian. Second, teacher education that oriented to Dutch (HIS) which was 6 year pre-service training program after 7 year elementary school (Joni, 1992). At that time, there was a classification of society that Indonesian people just had allowed to take a limited education in dealing to fill the lower employee at the difficult or remote places.

After Indonesian independence on 1945, teacher education institution had changed in 2 step, before and after 1954. Before 1954, it was known SGB and SGA that were 4 year pre-service training program in preparing elementary school teacher, and 6 year pre-service training program also to fulfill the need of elementary primary school teacher, even until 1956, SGA graduation had allowed to teach in junior high school. In that era, for fulfill the emptiness of senior high school teacher, government prepared BI and BII certification in 2 and 4 year study after senior high school (Joni, 1992) .

An after 1954 era was an important moment that many changes in teacher education institutions were occurred. In 1954, government established the higher institution for teacher education (Perguruan Tinggi Pendidikan Guru/PTPG) in Bandung, Malang, Batu Sangkar – West Sumatra and Tondano – South Sulawesi. There were 2 kind of programs in PTPG, first, Bachelor or BA degree in 3 year study after senior high school, and second, Doctorandus or Drs in 2 year study after BA. By design, the BA program was prepared for fulfill the need of junior high school teacher, while Drs for senior high school teacher. After 2 year, dealing to increase the qualification of teacher, PTPG had merged to an exist University and called the faculty of teacher training and education (FKIP). In the meantime in 1957, SGA graduation had not allowed in teaching junior high school anymore, while, the BI and BII program was integrated into FKIP. Those efforts of government to increase the qualified teacher had not

been enough because the need of graduated teachers from University were increased. In relations with expanding the capacity of FKIP, in 1963, government had developed FKIP to be institution of teacher training and education (IKIP) that was separated with University (Ministry of Education, 2002).

Those history notes of teacher education in Indonesia were given the description that from the past time, it seemed that the changes of teacher education institution were just for temporarily purposes, it was just to fulfill the lack of appropriate teacher in some places in Indonesia. At that time, the demand of education in Indonesian civilization was still simple, it was just to eliminate the unilliterate people.

### **The Task And Function Of Faculty Of Education**

As mentioned above that faculty of education was established by government to fulfill the need of qualified teacher in many level of school. Although it seemed that institution has been asked the demand, but it was not enough for the change of time and society. In globalization era, the demand of high quality of everything is a must, it makes the faculty of education must think to enlarge the vision not only preparing the qualified teacher, but also to serve the multi competent teacher. It means that faculty of education has to build the multi function teacher education program, so that the graduation will be able to compete with others in satisfying the stake holder that needs the certain kind of education. Tilaar (1998) said that to achieve the excellent standard of teacher education, faculty of education has to look this kind of thing.

- a. to build the connection to university especially in coaching the middle school (SLTP/SLTA)**  
the purpose of this task is that teacher profession need to accommodate the growth of knowledge and technology. In this case, University seems to bring knowledge and technology into teacher education program that is prepared by faculty of education
- b. the shape of students recruitment**  
It is need to redesign the students recruitment of teacher education program. The students were supposed to pass the tight examination in entering the faculty of education.
- c. Arrangement of the serious training program**  
Along with the growth of knowledge and technology, the training program is needed to give the novelty of education knowledge that will increase teaching profession.
- d. to develop the qualified education for academic staff of faculty of education**  
One aspect of excellent teacher preparation is a competent academic staff that can arrange the qualified instruction in faculty of education.
- e. Supervision**  
Recently, the principle of total quality of management (TQM) is the key to arrange the education. One of the aspects of TQM is the supervision. The main purpose of supervision in education is to move all of the aspects of education organization to reach the best quality of education.
- f. The improvement of the quality of education management**  
Other aspect in applying the principle of TQM is that a good management. The professional staff that masters the aspects of good management, will bring the innovative and creative thinking to improve the quality of organization output.
- g. People involvement**  
Teacher is not a perfect person. The people such as parents and other education training staff is very important to bridge the theoretical knowledge in institutions so that it will be applicable and match in the real situation.

**h. The resources**

In globalization era, the education equipment such as electronic tools (TV, Video, ect) and internet facilitate the student of the faculty of education to be high confidence teacher in facing the world.

**i. The acknowledgment of teaching profession**

The professional organization of teacher education have to communicate the innovation of education continually to the people, so that people realize the existence of teacher.

**j. Professional competition**

The government has to aware that the profession of teacher also need the appropriate incentive to improve their profession in industry society in globalization era.

Practically, in journey of faculty of education, it is not simple thing to bring into reality. The efforts to arrange some model of faculty of education have done. In reaching the best model of faculty of education in twenty-first century, there is a convention among the faculty of education in Indonesia that produced an alternative of faculty of education structure that is described below.

<b>Institution</b>	<b>Faculty</b>	<b>Department</b>	<b>Program</b>
A. The university that is from teacher education institution/IKIP			
1. Type 1 university	1. Education	Education	Education plus non education Education
	2. FIP	Education	
2. Type 2 university	1. Non education	Non education	Education plus non education Education
	2. FIP	Education	
3. Type 3 university	1. Non education	Education	Education plus non education Education
	2. FIP	Education	
B. Institute/IKIP	1. Education	Education plus Non education	Education plus non education Education
	2. FIP	Education	
C. University that provides faculty of education	1. Faculty of teacher training and education or	Education	Education
	2. Faculty of education	Education	

**Table 1. the basic model of faculty of education**

The proposed model of faculty of education in table 1 can be improved and agreed with the principle of institution development, that is effectiveness and efficiency, and also adjusted with the development of teacher profession in the future.

## **The UT's Models of Teacher Education**

One of the main reasons for Indonesian government to establish Universitas Terbuka (UT) is to improve the teachers' competences. At the end of 1970s, there were a lot of lower and upper secondary school teachers took temporary programs so that they were not qualified to teach in the lower and upper secondary schools. The improvement of teacher education through in-service program (The Diploma II for lower secondary school teachers and The Degree/S 1 Program for upper secondary school teachers) is not easy because of finance and time. Teachers couldn't leave their works. Therefore, Universitas Terbuka, as a distance education institution, is a appropriate choice to improve the teacher qualification without leave their teaching.

Regarding the aims of Universitas Terbuka establishment, Faculty of Education (FKIP) has a responsibility to fulfil the needs for improvement the teachers' qualification and quality. Based on that reason, programs that are offered by FKIP-UT are designed to improve the qualification and quality of teachers for basic and secondary education through in-service training, not pre-service training. At the first, FKIP-UT has offered the Diploma II Programs in science, English, bahasa Indonesia, social sciences, and mathematics for lower secondary teachers, as well as certificate programs (Akta Mengajar IV and V).

Along with government regulation of increasing qualification requirement for teacher in various levels of education, FKIP-UT develop various study programs. Right now, FKIP-UT offered various degree programs. Besides that, FKIP-UT together with other teacher education institutions is responsible for improving the qualification and quality of primary school teachers through Diploma II Program.

### *The Changing Paradigm of Education*

Much of the debate on teaching has been conducted in terms of polarities or dichotomies: student oriented versus teacher oriented. In the matter of this, Woods (2002) stated when researchers get down to investigating what teachers actually do, they find their practice much more complicated, featuring a mixture of elements that cannot be represented in a simplistic, polarized way (p. 74). Furthermore, Woods argued that teachers' practices are influenced by social and cultural context, personal biography, and professional experience.

Regarding the students-oriented education paradigm, there is a need for application of creative learning and creative teaching in the instructional process. These two concepts (creative learning and creative teaching) are interrelated. Creative teaching leads to creative learning. Students-teachers, by being creative students, can become creative teachers. In creative teaching, teacher are required to use their skills of invention and innovation to find out a way to help their students learn, to arrange conflicted elements in their roles, to resolve instructional problems from moment to moment, to make situational decision to optimise learning, and, not least, to handle pressures and constrains (Woods, 2002). In short, Woods (2002) stated there are four properties in creative teaching: innovation, ownership, control, and relevance. Innovation means that teachers should create new things. These new things are taken place in new skill mastered, new insight gained, new understanding realized, new knowledge accomplished, by students. Ownership of knowledge is showed by students who learn for themselves, not for examination or others. Control of learning process are demonstrated by students' self-motivated. Students are governed by task-oriented exercises. Relevance is expressed by teachers through constructing knowledge that is meaningful within the students' frame of reference. Accordingly, in order to implement students-oriented education paradigm, teacher education institution should focus its educational activities which give opportunities for student teachers to have experiences in creative learning and to apply creative teaching in their class.

### *The Kinds of Program of Teacher Education*

As mention before, there are two kinds of teacher education models that FKIP-UT is conducted in in-service teacher training programs. First model is applied in programs that are offered to teachers who already have the diploma in education. The programs are designed to simultaneously offer the subject matters and teacher education, such as, S 1 Pendidikan Bahasa Indonesia, S 1 Pendidikan Bahasa Inggris, S 1 Pendidikan Biologi, S 1 Pendidikan Fisika, S 1 Pendidikan Ekonomi dan Koperasi, S 1 PGSD Guru Kelas. The model that is applied in this kind of programs is known as a concurrent model. Another model is the concurrent model that is applied in the Akta Mengajar program for teachers who already have the diploma or degree in non-education program. By participating in this program, teachers will have certificate for teaching licences.

Concurrent model was inspired by philosophy of Langeveld. In concurrent model, teachers are required to learn to be a wholistic teacher, in which desire, opportunities, and systematic process become one in the teacher education program. It is a form of teaching or education sciences that are the integrated application of education sciences, pure sciences, and applied sciences. Concurrent model in teacher education can bring about integrated learning experiences and emphasized on both learns how to learn and learns how to teach a subject matter. On the other hand, consecutive model emerged because of problems in teacher competences of subject matters acquisition. To be a teachers, students have to take degree program in subject matter area. And then, they take teacher education program to achieve teaching competencies. According to these two models of teacher education, Director General of Higher Education in HELTS 2003 – 2004 stated that there is no justification for overly restrictive in conducting concurrent model and the viability of the consecutive model should be explored.

Concurrent model can be conducted either separately or with consecutive models in a teacher education institution according to its vision and mission. For FKIP-UT, concurrent or consecutive models is not a choice that have to select one of them. A profession require a whole education process in a formal education (to achieve a degree) and also in needed training programs. Those two models can be simultaneously implemented in teacher education, according the vision and mission of teacher education institution, as well as market driven. Therefore, FKIP-UT offers concurrent programs (S 1 subject matter education program, S 1 PGSD for elementary school teachers, D II PGTK for kindergaden teachers) and also consecutive ones (Akta Mengajar, Accredited Certificate Program).

FKIP-UT as a higher education institution that is responsible for community, one of stakeholders, conducts the education process by implementing the philosophy of progressive education. According to progressive education (Houston, 1984), there is a need to imprint beliefs and awareness on teachers that to increase a qualification is not only proved by certification acquisition, but also by professional performance which are sustainable, credible, and accountable for students' parents and community. To achieve professional competences, there is a need of learning experiences and comprehensive evaluation.

The learning experiences that students engage in studying at FKIP-UT are not only to study the learning materials, but also to actively interact with others students, as well as with other learning resources. Students' interaction with learning material is taken place through carefully reading printed self-learning materials and studying the audio-visual programs. Tutorials and study groups facilitate students' interaction with other students. Tutorials are provided in order to assist students in solving their learning problems and motivating them to be independent students. In the study group students may solve their learning or teaching

problems, discuss or present course materials, or plan and conduct social programs among them. Besides tutorials and study groups, students can ask to use other sources either provided by UT or available in the community to increase effectiveness and efficiency in independent learning.

Printed materials is the main medium in UT's instructional processes, included in FKIP. However, in connection with learning experiences which students are asked to practice and apply their new knowledge, i.e., the concepts and theories of instruction, self-learning materials packages do not only consist of printed materials but also audio-visual materials such as audio program, video program, and computer-based materials, i.e., computer-assisted instruction, web-based course. In addition, there are also science kit and music kit to facilitate students in their lab work and practices. Since the provided programs at FKIP-UT is an in-service program conducted through a distance education system, the school where teacher-students work can be a direct and natural laboratory to try out and apply new knowledge in their instruction (Braumoh, 2001).

An instructional process in all FKIP programs in principle is emphasized on self-directed learning approach. Students are required to explore by themselves learning resources that are related to the learned courses. However, self-directed learning does not mean that students have to study alone. They can study together with other students or ask their tutor when they get difficulties in their study. Therefore, students' success in their study is affected by their learning disciplines, creativity, and perseverance.

In order to assist students master the course objectives, FKIP-UT provides tutorials in varied modus. Besides learning assistance, interaction between students and tutors, and interaction among students taken place in tutorial process. There are four modes of tutorials, i.e., face-to-face tutorial, tutorial by mails, and tutorial by radio, television, and mass media, and tutorial by Internet. According to Race (1990), tutors have responsibilities to give feedback to students' works, to teach, and to support and help students in developing their learning skills. Therefore, in tutorial process tutors not only discuss the learning materials but also tutors should give the feedback to students work so that students will know what is wrong and what is right with their works. Besides that, tutors should motivate and help students in managing their study so that students' self-directed learning will improve.

Evaluation conducted in the all FKIP programs is required to tap students' comprehensive understanding. The domains of the evaluation are cognitive, psychomotor, and affective domain. The assessment is expected to be done in a holistic manner, therefore it is necessary not to rely solely on pencil and paper test for cognitive assessment, but other types and forms of test for wholistic assessment. The evaluation is administrated by using varied instruments which are intended to accommodate the need for multiple representations of understanding – or wholistic assessment.

There are six kinds of evaluation that the FKIP-UT uses to evaluate students achievement. Those are self-evaluation, practical/practicum examination, tutorials assignments, report of lab work or practices, opinion paper, final examination, and comprehensive examination.

- a. Self-evaluation is equivalent to the mid-semester examination. This evaluation is a take-home exam and administered to assess students' mastery of 60% learning materials, which are presented in the self-instructional materials. The type of instrument used in this evaluation is usually tests; objective or essay test depended on the characteristics of courses.
- b. Practice-based examination is conducted to assess students' performance in courses that require students to show their mastery upon certain skills, such as teaching practices, lab work using science kit, art performance, etc. Besides performance tests, students are also required to write a report or paper about the process and result of practices/lab work and

about the improvement of instruction process which students have done through classroom action research. In taking this evaluation, students are required to integrate what they have already learned within contextual situation and use learning resources available in their community. This is required because the provided tasks or assignments are related to their daily tasks as a teacher.

- c. Tutorial assignments that are given throughout the tutorial process are conducted to assist student's study step by step. The assignments can be in the form of achievement or performance tests. By provision of tutorial assignments, tutors can see the progress of students' understanding and knowledge.
- d. Final examination take place at the end of semester. This kind of evaluation is administered to assess students' achievement to all learning materials. The type of instrument used in this evaluation is usually tests; objective or essay test depended on the characteristics of courses.
- e. The teaching practices and comprehensive examination are conducted to decide students' mastery from the program. As mention before, teaching practice is conducted to assess students' skill in designing and conducting instructions and solving concrete instructional problem and improving the instructional process by doing classroom action research. Whereas, comprehensive examination is administrated to assess students' ability in expressing their perception and assertion about instruction in the school. Test item in comprehensive evaluation are designed to be problematic, comprehensive, and open-ended. Problematic means that test item are related to problems that have to be solved by using learned skills and knowledge. Comprehensive refers to students' responses to the item tests that integrate all learning materials from variety courses with scientific principles. Open-ended means that item tests give students opportunities to give responses from other perspectives that are relevance to marking scheme.

#### *The Outcomes of The Program*

FKIP-UT programs are aimed at producing qualified teachers for basic and secondary education. Qualified teachers are teachers who are both an educational expert and an educational technician. Educational technician teachers are teachers who rely on education sciences and teaching competences to be applied in instructional processes. They skilfully present various subject matters by using various strategies and methods because they have the rich repertoire of teaching. They are good presenters of subject matters, but they are not definitely able to transform knowledge in a unique learning experiences so their students can make meaning of given knowledge.

Meanwhile, educational expert teachers are teachers who stand on both content (knowing) and ways of making other know/learn. The integration of those will make students optimally learn and develop. Teachers should be neither an educational technician nor an educational expert. They should be both an educational technician and an educational expert in totality. The existence and role of teachers as an educational technician and expert will assure the education process be able to civilize and to endeavour students to be Indonesian citizen who are intelligent, skilful, good personality, and courteous. This is along with one of the Indonesian education principles, i.e., that education is a process of civilization and endeavour students that takes place for long live (Undang-Undang Sisdiknas, 2003).

In terms of number, The Table 1 shows the number of active students and the graduates since UT's inception in 1984.

Table 1  
The Number of Active Students and The Graduates

No.	Programs	Number of Students	Number of Graduates	Remarks
1.	S 1 Pendidikan Bahasa Indonesia	1,317	3,364	
2.	S 1 Pendidikan Bahasa Inggris	1,523	4,212	
3.	S 1 Pendidikan Matematika	1,607	3,059	
4.	S 1 Pendidikan Fisika	930	1,697	
5.	S 1 Pendidikan Biologi	1,127	2,936	
6.	S 1 Pendidikan Kimia	413	2,412	
7.	S1 Pendidikan Ekonomi	847	52	offered in 2003
8.	S 1 Pendidikan Kewarganegaraan	824	129	offered in 2003
9.	D II PGSD Guru Kelas	89,006	433,958	
10.	D II PGSD Guru Penjaskes	8,099	34,831	
11.	S 1 PGSD Guru Kelas	20,340	-	offered in 2002
12.	Akta Mengajar	10,033	14,567	
	Total	136,066	501,217	

The 501,217 graduates are excluded graduates from Diploma II and III, and certificate programs that were closed. There are 14,720 graduates from those D II, D III, and certificate programs.

In terms of teachers' performance, study findings show that teachers performance (mostly elementary school teachers) in Indonesia has not encouraged yet students to be self-directedly creative. Another study indicated that teachers spent a little time to explore the connection between sciences concepts and its application in real situation (Atrup, in Sinaradi, 2000). Meanwhile a study by Berg (Sinaradi, 2000) showed that most teachers tend to use expository methods in instructional process in order to make students accomplish learning materials. Siegel (Sinaradi, 2000) found out that instruction process in the classroom consists of activities to memorize information. Those findings show that teachers, especially elementary school teachers, must to improve their competencies.

Concerning the competencies of planning, conducting, and evaluating instruction, Wardani, et al. (2002), studied elementary school teachers' performance. The sample of the study were teachers who graduated from D II PGSD program offering by FKIP- UT. The study showed that teachers' competencies in planning, conducting, and evaluating instructional process indicated well enough. In handling instructional problems, teachers can identify problems, analyse causal factors, and solve the problem. Besides that, teachers who graduated from FKIP-UT are relatively successful. There are some FKIP-UT alumni who can continue their study either in Indonesia or abroad. Some of them won the national award, sch as successful in national Toray Science Education Award.

## **The issues Faced and Challenge for Teachers Quality in Era Globalization and Internationalization**

The DII-PGSD Program is of most important to UT and to Indonesian national education as a whole. Most primary school teachers in Indonesia were only trained through teacher training programs equal to high school levels. In 1990, Government of Indonesia (GOI) has set a new regulation for primary school teachers to at least hold a two-year diploma certificate in 'classroom teaching' or 'physical education teaching'. The government then appointed six teacher training colleges to up-grade the qualification of the existing teachers (approximately 1,200.000 teachers) into a two-year diploma graduates, and UT is one of the six appointed institutions.

The reason of appointing UT as one of the institution to up-grade those teachers is very significant. As an open university using distance learning mode, **UT will be able to train teachers without them having to leave their teaching job.** This is very important since the schools would not be able to afford losing their teachers while teachers are pursuing their studies. Furthermore, **GOI realized that if the up-grading program was to be done only by conventional face-to-face institutions, it would take at least 1,200 years to complete since their average maximum capacity is only around 200 students per year.** With UT, because of the characteristics of distance education to reduce barriers related to space and time, GOI is able to train teachers in a much faster way. Since 1990 up to 2003, UT has been able to train 579,906 student teachers and over 450.161 of them are already graduated. This means that **UT alone has trained over 48% dan has up-graded the qualification of almost 38% of all Indonesian primary school teachers as mandated by the GOI.**

UT has recently launched several new study programs, namely Bachelor Degree (BA) programs in Primary School Teacher Education (known as **S1-PGSD**) The addition of S1-PGSD study programs will expectedly increase UT student body. The recent law on national education launched in 2003 has enhanced the minimum requirement of primary school teacher's qualification into full bachelor degree (S1). This means that those teachers who have now graduated from the DII PGSD program have to continue and take the S1 PGSD program. With the anticipation of the afore mentioned new education law, UT has opened the S1- PGSD program since 2002 and now has about 12.580 (as registered per semester 2003.2) active students. A feasibility study shows that approximately 81% of the teachers graduating from the DII-PGSD (from UT and the other five appointed teacher training colleges) expressed their interests in continuing their education through the S1 PGSD program at UT.

Behind the success of UT services to the majority of Indonesian teachers, there are a number of issues faces that should be taken into consideration to be improved by UT which are based on the criticisms from public, GOI or based on self evaluation. The improvement toward the quality

From the analysis of the present conditions of UT in conducting the teacher training program, there are several key issues which are essential to the development and quality improvement of the program in order to serve the Indonesian teachers properly. The key issues identified are as follow:

### **1. Student Support: Tutorial**

One of the the key issue that should improve is the student support system especially in conducting tutorial. It never can be denied that the main problem faced by the program is how to give tutorial services to every single "teacher students" all over the country.

The problem faces not only from geographical condition, tutors' quality but also students study styles.

The tutorials offered by UT are face-to-face tutorials, radio tutorials, correspondence tutorial, and electronic tutorial via internet. While the students' entry behaviors and characteristics still needs some improvement, quality tutors are also hard to find. Most tutors are lecture or teacher-oriented, or content-transmission oriented. In many cases, it was also found that tutors do not have good level of mastery of subject matters. Thus far, tutors are free to design and develop their tutorials plan and scheme. They also have freedom in organizing the sequence of the tutorials, instructional materials for tutorials (in addition to UT's printed and non-printed materials), and also tutorials strategies, tactics, and media. Such a situation has created a series of tutorials methods and materials, which are not standardized (despite the standardized curriculum offered by UT throughout Indonesia). As a consequence, UT students at different region will receive different quality of tutorial services, depending on the tutors.

On the other hand, there were many students found difficulties in preparing them self for tutorials sessions. The problem calls for quality tutorials to provide guidance to students to be independent learners. Tutorials can thus provide a transition mechanism for students, that after such a period, they will be able to embark from being teacher-dependent to being independent learners.

Therefore, UT feels the need to develop a standardized face-to-face tutorial kits which provides standardized guidelines and materials for tutorial for UT students all over Indonesia.

## **2. *Practical Work sin the Laboratories and Practice Teaching***

In addition to general tutorial scheme, there are also special tutorial schemes, i.e., for practical works in the laboratories and practice teaching. First, laboratories facilities are not at the same standards across Indonesia. Second, access to laboratories facilities is also scares – good laboratories which are usually available at public universities in big cities are rarely available for UT's students (as additional users), and if available they are usually charging a high laboratory fee. Other laboratories are available at schools (junior and high schools), but the facilities are sometimes not good enough. The same applies to practice teaching, although place for practice teaching is not a problem, qualified supervisor for practice teaching is rare. These situation of practical works and practice teaching call for smart solutions, among others the development of dry laboratories (computer based simulations), and the availability of mobile laboratories across Indonesian geography. Dry laboratories can be designed for students to work on drill and practice exercises, and also analytical exercises to achieve certain competencies which entail to the practical works. For this reason, there should be a thorough analysis conducted upon the competencies to be attain from a particular practical work, in order to be able to determine competencies which can be learned through dry lab, and those which must be learned through a real laboratory work. For the purpose of providing a real laboratories for students, especially in remote areas, mobile laboratories can be an adequate choice. Within the mobile lab, facilities to conduct scientific experiments are provided as required by some courses. In addition, there will also be a computer connected to the internet, to run dry lab as well as to communicate with UT and other students or learning resources. Since it is going to be mobile lab and it is not stationed at one position, it can reach a wide audience through its travel, thus it will be cost effective.

For teaching practices, a teaching clinic is envisioned to be a place where students and tutors or supervisors will meet, be involved in an academic sharing and discussion, practice teaching, and practice classroom action research. Tutors and or supervisors are

expected to guide and facilitate students in many activities in the clinic. The clinic should be equipped with micro teaching laboratories, computer and internet access, and also subject matter experts. The clinic can be station at the regional office as well as within a designated school. With the teaching clinic, UT's students needs for teaching practices will be taken care of.

### 3. *Learning Content*

To provide a quality learning experience for students, UT's students must be trained and oriented to be a distance learners. Therefore, **students orientation kits** is needed. The same situation applies to the tutors – who are mostly lecturers from local universities – they need to be trained and guided to be UT's tutors instead of lecturers. For this reason, **tutorial kits** is needed, so that the tutorial will be conducted at the same quality standards across country.

With the advancement of educational technology, and wider access to technology by students, the availability of **multimedia materials** will give students alternatives in their learning experience, or even enrich their learning experience. The multimedia materials will certainly enrich the print-based materials used by UT as the main learning medium.

### 4. *Information and Communication Technology*

In the networked world today, UT system especially Faculty of Education is challenged to meet the changing needs of the clients, whose paradigms are shifting from the industrial age to the knowledge age, to perform open management in response to the pressure for public accountability, to focus on the learners' needs, and to be engaged in global networking. Quality becomes a determining factor and foundation for success for UT in domestic as well as global competition. Advances in ICT and the free flow of information allow the need for lifelong learning to become more flexible and imperative in any organisation and society.

New technology for learning changes the way people learn, utilise technology for learning, and conceive of learning itself (Inglis, Ling & Joosten, 1999). The function of media is more to support interaction rather than just communication. As technology knows neither economic nor political border, ODL system has the opportunity to employ it in ways that benefit both the institution and its learners. In a global networking and partnership environment, ODL institutions are challenged to develop quality ODL products and services acceptable by global market, and to meet the diverse and dynamically changing needs of their clients residing in any location irrespective of national geographical border. E-learning, which involves the use of Internet to deliver educational programs, has been applied to enhance knowledge and performance (Rosenberg, 2001). For an ODL institution in Indonesia, e-learning is developed to provide better services for distance learners through web-based learning material supplements, online tutorials, online lectures, and online dissemination of examination results (Belawati, 2003).

### 5. *Partnership and Cooperation*

UT should develops partnership and cooperation with similar and different institutions to support the viability of its operations. Partnership and cooperation are important to strengthen the core business of institutions and enhance the capability to capture market niche. Outsourcing is one form of partnership to serve as means for UT as an institutions

to deliver programs more effectively and efficiently. For example partnership for course production and delivery, and tutorial services.

In the era of globalization UT is also challenged to respond to the new direction and imperatives of globalisation and internationalisation in the provision of educational service. Networking can be a natural solution, while competition is the natural phenomena. UT may be engaged in international cooperative effort, such as joint development of programs, recognitions of courses and so forth. In the mean time, they are also confronted with each other on a competitive environment. UT should realise that customers have a high degree of freedom in terms of selecting which distance learning course they would like to learn, how they would learn it, and which institutions provide the best quality courses at their convenience and at affordable price.

## 6. *Human Resources*

With the rapid advancement of subject matter, and educational technology in general, one's skills and knowledge becomes outdated easily. Therefore, training and re-training of human resources in UT is highly essential. **Short term training** is needed to refresh UT's staff members – keeping them up to date with the latest development in the field, keeping them abreast with the strategic issues in the area of management of distance learning. In addition, long term training in the form of **further education** is also needed to increase qualification of some staff members. Strong and high quality human resources at UT is needed, not only to manage UT's programs and services, but also serve as human capitals to UT, so that UT can serve other institutions, especially in the area of distance education.

As a conclusion, it becomes crucial for UT to develop core competence in order to survive in a global environment. The term 'core competence' in managerial concept, is defined as a business strategy that enables a company to perform better than any other company in the market. It is crucial to identify which business should be undertaken in terms of products, markets and activities, and to match customer expectations with the institution's capabilities, based on the skills and resources available.

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