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<td>Author(s)</td>
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Training Needs For Distance Education In Indonesia

By

Wan Usman
"TRAINING NEEDS FOR DISTANCE EDUCATION IN INDONESIA"

By

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for Distance Education in Asia"
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1. Introduction

Thirteen years ago, Indonesia's Second Five-Year Plan identified the Government's goals for education and pointed the direction for educational development. In that document the philosophical basis for a distance learning emerged, although the actual open university (UT) establishment would not appear until 1984 the first year of Indonesia's Five-Year Plan.

Education must become more relevant to development, and thus promote improved economic growth, higher productivity and more skilled manpower within the Indonesian culture.

It was recognized in 1974 that not all Indonesians could take advantage of the formal school system. Therefore, alternative educational and cultural activities were suggested such as:

* correspondence course related to development project
* television, radio, libraries, and cultural centers to increase nonformal educational programs
* seek more effective and economic methods of teaching using newer technologies
* conduct tertiary-level courses not necessarily leading to degrees

Many adults in today's labor force were unable to attend a university because they had to earn a living. For example, for primary school teachers, a first-level diploma initially was sufficient. But

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now these people need new skills to perform higher level duties. One of the solution is to earn a university education. The need for trained manpower at all levels including university graduates is greater than ever if sustained national development is to continue. However conventional educational solutions are inadequate. From this figures, it is clear that the UT academic program will have a positive impact on the level of education.

Now the UT will provide a broad umbrella for a wide variety of programs, from certificates to professional degrees. The length of time required for UT students to acquire a degree, diploma or certificate will vary. The diploma in teaching and the certificate in teaching method have one, two and three years.

The sarjana degree which is equivalent to a US bachelors degree is more flexible because students can take 144 - 160 credits to achieve the degree.

It is expected that a maximum of ten years will be allowed for attaining the sarjana degree; four years would be a minimum.

On the basis of need and efficiency of development, the UT selected Public Administration, Business Administration, Economic and Applied Statistics as the first-year academic programs. There is a shortage of trained manpower in these disciplines. Now in addition to these, under the UT umbrella, there are Management, Mathematics, Taxation, Education and English programs.

The basic ingredients of distance education found in the existing Indonesian programs include heavy reliance on printed self-instructional modules, face-to-face tutoring, occasional use of media (particularly radio, television and audiocassettes) and conventional examination procedures.
1.1 Learning Materials

As mentioned above, the learning materials use a print based, modular format, nine modules per three credit course. Audiocassettes will be used to supplement the printed modules, to strengthen the weaker sections of the printed materials and to provide additional examples of concepts. Open broadcast television and radio program be produced in limited numbers.

All the learning materials are developed and produced on a contract basis.

The printed modules are being written by regular university professors who are expert in some areas of study. Audiocassettes scripts are prepared by junior academic staff, working with content specialists. The same is true for television scripts.

1.2 UT Communications

All UT communications between the Jakarta headquarters, the Regional Unit, and the students are carried by postal service, telex, telephonic, television, radio, SSB radio, special courier, newspaper. Appendix I will show the matrix of communication systems used by UT.

1.3 Student Services

Tutorial instruction is delegated to the 32 public universities throughout Indonesia. Each university has created a Unit that will provide tutorial and student services for UT students enrolled in a given center. There appears to be close cooperative with public universities at the national level.

Computer are used for information and data processing, these are held in Jakarta headquarters. Information processing was identified as a critical area of UT operations. To process efficiently thousands of applications and tests, manage student records, and so forth, UT must
use computer technologies.

2. **Issues in UT development and training needs**

   There are four main issues in UT development now.
   
   (a) learning materials and test items development (instructional materials)
   
   (b) tutorial
   
   (c) communication and delivery system
   
   (4) students registration in large number

2.1 **Instructional Materials**

   If the training needs should be held, then it has to support those four aspects. Learning materials and test development are organized by each Dean through course Development Teams. They have few permanent staff, fewer than five per faculty, with other professionals affiliated on temporary or contract terms. Course Development team are the heart of the academic program. They provide the complete educational package which represents a course for the UT student.

   The faculties are responsible for the coordination and planning of academic program, curriculum development, course development and test items development.

   The training for course and item test development is necessary, since a good learning material needs a certain way to write, in order easy to understand. Writing materials for distance learning differs significantly with writing textbooks. The students will have difficulties if the learning materials are not clear enough and shortage of showing example of the application of the theory.
To clarify a certain concept to put in the printed material need a certain skill. The same is true for the writing of test item. Up to now the evaluation is objective test and graded by computer, because it is assumed effective enough to evaluate thousand of student. However, as we know well, that the essay test is important to evaluate the student with high level and for particular courses the essay test is indeed necessary. The problem is how to construct an essay test so that computer can grade it.

The techniques of evaluation for distance learning, can help much to make distance learning goes well. Therefore any training to these, will support distance learning development. For example, test item construction, test item analysis and the possibility of making essay question so that it's answer can read by computer.

While the primary medium for UT distance education is printed materials, other media will be used to provide additional learning and information for the student. The course development team will assume responsibility for specifying the kind, amount and use of educational media such as:

* Audiocassettes
* Audiocassettes with accompanying picture sets
* Radio broadcasts
* Videocassettes
* Television broadcasts
* Home study kits.

Also included as educational media would be any significant use of pictures, graphics, and illustration beyond the printed word in the various modules, workbooks, study guides and tutor guides. They require
additional technical skills, equipment and planning. The design and production of media for educational purposes is a complex process. Research and evaluation of learning principles, design and production variables are needed.

Media development and production activities will involve the following tasks:

* Development of module study guides using the systems approach
* Design of the media component of courses
* Scriptwriting of programs (radio, television, audiocassette)
* Preparation of visuals including illustration graphics design, technical drawing and photography
* Providing technical advice for UT communication and delivery systems
* Design of home study kits such as biology and chemistry
* Providing on the job training in educational media for new UT staff

These activities are diverse and complex. A major function of the course media components will be to enhance learning through various stimuli. By studying a modest amount of educational media the distance learning student will increase his learning experiences. It is reasonable if a certain amount of training for those components are needed.

2.2 Tutorials in UT

UT must provide its students with a quality of instruction and a level of service comparable to other universities. It is intended that the comparable level of educational service in UT be provided by four components:

(A) Manager

As a manager, the instructor:
(a) Sets rules and regulation about the conduct of the course, such as
attendance etc.
(b) Sets schedules for home work and examination
(c) Elaborate grading policy
(d) Ensure that the course syllabus is followed

(B) **Evaluator**

As an evaluator, the instructor:

(a) Design tests to measure student performance
(b) Assign importance to various tests.

(C) **Facilitator and Resource Person**

As a facilitator and resource person, the instructor:

(a) Provide references for enhancement or remedial work
(b) Summarizes the text and provides explanations where necessary and
clarifies text material
(c) Provides experiments and activities to assist or enhance learning
or to provide skill training.

(D) **Diagnostician**

As a diagnostician, through the analysis of the results of exams,
the instructor:

(a) Diagnoses student’s specific learning difficulties.
(b) Prescribes proper measures for student to overcome difficulties.

The majority of the UT instructors' function is handled through a
combination of print and non print media; computers and non specialized
staff. Whenever instructors are needed, it is recommended that the
function noted above be divided among several individuals, each
performing a specialized task, to ensure better services and higher
quality. UT should employ a number of strategies for providing instruction and learning experiences to its students.

**Tutors**

Field tutors are provided by cooperating universities in Regional Units. They constitute the care of UT's face-to-face delivery system, its crucial link with the students.

Senior tutors are basically tutor supervisors who will be based at central headquarters. They function are to provide training opportunities and informational memos to field tutors. They also are responsible for conducting training to improve the quality of tutoring and uniformity of services throughout the UT network. Up to now senior tutorial services is not sufficiently staffed yet to assist students directly through exchange of letters.

National lectures are prominent academicians who will deliver lectures through open radio and television broadcasts. Such lectures will be for the general audience and their primary purposes will be to motivate, generate interest, add variety and provide an overview of the course and its components.

Test assessment specialist will assume the task of designing tests for courses on a continuous basis within central headquarters. Field tutors will be trained to grade the essay type tests that are necessary for some but not all courses in a given program of study.

2.3 **Communications and Delivery System**

There are specific administrators responsible for:

* Communication with Regional Units through telephone, telex, facsimile, data transfer, and SSB radio. Some of the Regional Units
are linked together and to the Central Office through the existing Rural Satelit Project located in Ujung Pandang and linking the members of the construction of Eastern Islands Universities Matters related to the Post Office, which handle both deliveries of course materials to book stores and UT student financial transactions, as well as notices, information, records, and so forth.

* Television and radio broadcast of course content, UT announcements, and public service announcements. Mostly a function of Center of Media Production, Information, and Data Analysis, the use of media is experimental at UT and will remain so for several years.

* The UT examination system is complex and must have a well-controlled. Using UT staff as special couriers is one way of maintaining control of the examination system.

Central administration is familiar to any university. There are few distinctive feature at UT, except for the added responsibilities of a nation wide network of regional offices which require additional communication and travel services. The access to a well-equipped computer system can minimize administrative complications.

One of the most challenging issues facing UT is how to train its staff of young, recent graduates. There are several categories: academic/professional, administrative/professional, and administrative/clerical/technical/other.

The need to produce courses and serve a large student enrollment in a short period of time makes rapid and efficient staff training an urgent priority. It is desirable to have on the job staff training linked with solid academic training which leads to degrees, diplomas, or certificates. The requirement for other staff categories are similarly
pressing and large. By having its own Training Institute with care faculty, it should be possible for UT to have a relevant, coherent staff development program which reflects Indonesian values and the special problems faced in developing distance education.

2.4 Student Registration

Information processing was a critical area of UT operations. To process efficiently thousands of applications and test, manage student records, UT must use - of - the art computer technologies. Another critical aspect of UT operations is transformation transfer. The archipelago's geographic barries continually pose a challenge to effective communications. On the one hand, UT needs a dedicated communication network for administrative and selected instructional information transfer. On the other hand UT must make use of a variety of media including open broadcast radio and television to supplement its print - based learning materials.

3. Manpower Training needs

UT is facing how to train the large numbers of staff in specific skills while still working at the highest productivity level possible.

3.1 Workstudy Program

This procedure is equivalent to the USA University system of graduate where students combine studies with work related to their disciplines. In the case of UT, the emphasis is on the work produced rather than the studies. It is assumed that the focus of the homework, projects, theoretical reading and thesis will be on the staff member's on going work. This will benefit to both the staff member and UT for example the thesis and dissertation topics will, whenever possible,
originate from research problems concerning distance learning issues.

3.2 Computer

Short and long term training courses for computer specialist through other institutions is needed. Applications and operations case studies and problems can be formulated which use the distance learning computer system as a focal point.

3.3 Course development

Specialties other than computer and course development also can be offered at the UT by importing curricula from other institution adapting them to UT conditions and either borrowing training staff or using contract trainers.

3.4 Management

Distance learning like UT is not a conventional university. It must manage a student body spread over more than three thousand miles of island and seas.

The organizational structure of UT is closely resembles other state universities. For example, the computer service is organizasionally a sub unit of the Center for Media Production, Information and Data Analysis. But the computer service unit interacts directly with virtually all of the other components of UT. This interaction reflects the implementation policy better than UT's formal organizational structure which is not based on operating a distance education system but rather assumes the standard university bureaucracy. The diagram presented in Appendix II shows some of the dynamic relationships among the following functional groupings: Academic Program Group, Academic Services Group, Regional Services Group, and Support Group.
The student's contact with UT is through the two groups responsible for student services the Academic Services Group dealing with admissions and the local Regional Services Group which organizes tutorials and examinations and solves local administrative problems. From this structure the management training for such kind of distance learning would be important.
# APPENDIX I

## COMMUNICATIONS SYSTEMS USE BY UT

<table>
<thead>
<tr>
<th>Communication Channel</th>
<th>Information Format</th>
<th>Receiver</th>
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<tbody>
<tr>
<td>Postal Service</td>
<td>Audiocassettes</td>
<td>Students</td>
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<tr>
<td></td>
<td>Printed modules</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Applications</td>
<td></td>
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<tr>
<td></td>
<td>Routine admin.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>correspondece</td>
<td></td>
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<tr>
<td>Telex</td>
<td>Data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special admin.</td>
<td></td>
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<tr>
<td></td>
<td>correspondece</td>
<td></td>
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<tr>
<td>Telephonic</td>
<td>Official communica-</td>
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<td></td>
<td>tions</td>
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<td></td>
<td>Emergency communi-</td>
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<tr>
<td></td>
<td>cations</td>
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<tr>
<td>Voice and Fascimile</td>
<td>Printed instruc-</td>
<td></td>
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<tr>
<td>Via Satellite</td>
<td>tions</td>
<td></td>
</tr>
<tr>
<td>(Experimental)</td>
<td>Printed admin.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral admin.</td>
<td></td>
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<tr>
<td>Open Broadcasts TV</td>
<td>General UT news</td>
<td></td>
</tr>
<tr>
<td>and Radio - National</td>
<td>Tutorials</td>
<td></td>
</tr>
<tr>
<td>and Provincial</td>
<td>General Instruc-</td>
<td></td>
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<td></td>
<td>tions</td>
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<tr>
<td>SSB Radio</td>
<td>Administration</td>
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<tr>
<td>(Experimental)</td>
<td>Tutorials</td>
<td></td>
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<tr>
<td>Special Courier</td>
<td>Examinations</td>
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<td>Newspapers</td>
<td>General UT</td>
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<td></td>
<td>public relations</td>
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</table>

**Notes:**
- Regional Units, Headquarters, and Students
- Regional Units, Headquarters, and Other institutions
- Eastern Islands, Regional Units
- Students
- Regional Units, Remote local study groups (four selected sites)
- Regional Units, Headquarters
- Students, General public
APPENDIX II

ORGANIZATIONAL STRUCTURE

ACADEMIC PROGRAMS GROUP

ACADEMIC SERVICES GROUP

SUPPORT GROUP

REGIONAL SERVICES

STUDENT
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