

13. Summary

The total range of Education Technology for Education and Culture (TKPK) activity deals with the five clusters of goals of education in the National Plan: 1) increase learning opportunities and improve quality of education; 2) expand educational services; 3) make education relevant to student needs; 4) increase effectiveness and efficiency of delivery system; 5) improve the system of information regarding national education policy. The present Education Technology project is implemented within this framework of goals. Therefore, projects such as the World Bank Project III, Primary Education Development (P3D), including its upgrading teacher via radio component (TKPD) have been more smoothly accomplished. This component is concerned with radio broadcast to about 60,000 teachers living in remote areas in 11 provinces.

Based upon the original project documents (PP) connected with this project, there have been slight alterations in the implementation of training activities. These changes rise from regulations governing the length of time civil servants may leave their jobs for training. Also, within a unit such as TKPK, it is not possible for a large group of staff (20) to be withdrawn for simultaneous training and continue to maintain the same level of effort.

In addition to its higher education focus, this project has assisted in the implementation of a pilot project in mass media use for nonformal education. This assistance constitutes an elaboration of the project design presented in the original PP.

Since the establishment of the Education Technology project the TKPK project has been assigned responsibility for an experiment in open junior high school to try to expand educational opportunities for the nations youth. This is a high priority in the national plan and the existing project provides input to that effort.

The project is accomplishing all of its objectives at this time (see Section 17). Twenty students received MS degrees from Syracuse in December, 1978. The Technical Assistance Team has supplied many instances of group and individual based training which should indirectly increase the institutional capability of TKPK. In addition, they have worked directly on high priority TKPK output required in projects such as Open School and Out-of-School Education. The development of the graduate program at IKIP Jakarta is proceeding smoothly, and lectures have been given at IKIP's Bandung, Semarang, and Yogyakarta. No requests for assistance in preparing research proposals for higher degrees have been received from sources other than IKIP Jakarta. Software and Courseware have been developed and provided for translation in various areas including: 1) AV equipment use, (2) instructional television, (3) photography, (4) graphics, (5) slide/tape production, (6) module preparation, (7) program evaluation, and (8) processes of educational technology. Progress has been made on the updated INETS (Indonesia National Educational Technology System) plan. No major problems, as such, have been

encountered. "Problems" encountered arise from, (or could be called), "normal TKPK working conditions," such as shortage of skilled manpower, very busy work schedule of TKPK/Technical Assistance Personnel, and lack of extended time intervals to work extensively on development tasks such as team building.

14. Evaluation Methodology

Methodology used has been limited to observations and brief reports. The results of these indicate that in excess of 90 percent of intents (as adjusted in #13) have been achieved. This PES covers the 18 months during which Syracuse University has provided technical assistance. Contractor will depart Indonesia in March, 1979.

15. External Factors

Before the project was off the ground, new assignments were given TKPK such as training field staff and producing multi-media learning materials for the nonformal education programs (World Bank Project VI) in six provinces.

Such external factors have reinforced the existence and validity of the project. Even the temporary difficulty experienced relative to TKPK operation due to absence of staff members in training at Syracuse reinforces the need for that training. At the same time, the external factors (increased output demand and increased work load at TKPK due to absent staff) has had the effect of reducing time available for direct, extensive/intensive, strategies of capability development.

During the tenure of the project, the status of TKPK has been upgraded from special project under BP3K to a line unit of the ministry reporting directly to the Minister of Education and Culture. This development and status change has occurred quite rapidly considering the recent history of such movement. This movement and status change is in direct response to the contributions TKPK has made to the achievement of national educational goals. This alternation was confirmed by Presidential Decree Number 27/1978.

There have been no major changes in setting which have had an impact on the project. The only external factor influencing the expected work activity of the Technical Assistance Team has been the assignment of additional required output to the TKPK project since the beginning of the contract.

16. Inputs

From the TKPK frame of reference as host country contracting representative, the direct management of the project through the funding cycle with all its components and into the implementation of the project has been a new and outstanding experience in the area of management. This experience should serve well in future similar undertakings.

Relative to inputs, there was the feeling shortly after the onset of the project that the Technical Assistance Team could have used another person. With the departure of two members of the team at the end of 12 months and with the remaining (2) members of the team assuming teaching, development and monitoring responsibilities of those departed, it seems certain that the additional person/year could have been well utilized in assisting the Open Junior Secondary School project and conducting in-country training. Other than the re-confirmation of this feeling, all inputs for the project have proven sufficient.

17. Outputs

Project outputs seem to meet and exceed expectations in terms of quantity and quality.

1. 20 MA Degrees (\$278,000)

Syracuse University designed a special 12-months graduate program for 20 Indonesian students. Degrees were awarded in December, 1978, and students returned to Indonesia. Four students with only the Sarjana Muda degree were required to do additional work to qualify for the MA degree.

2. Commodities (\$60,000)

All commodities specified as desired by TKPK have been ordered by Syracuse. Most have been shipped to the project. Books and light materials arrive on a short time line, but major purchases were often held in customs.

3. INETS Update (\$6,000)

The document representing this update has been described and work is progressing on its four parts. Part one describes the revision of the existing document to reflect the realities of TKPK development through September, 1977. Part two describes the project's developmental outputs associated with the status (September, 1977 - November, 1979). Part three describes the plan for the institutionalized operation of the Center for Communication Technology for Education and Culture (PTKPK; PTKPK name under Ministry line status) through Repelita III. Part four describes forward planning for Repelita IV for PTKPK.

4. Research proposals for graduate degrees (\$3,000)

All twenty students at IKIP Jakarta are presently involved in this process and 1st drafts were completed in

November, 1978. A second draft should be completed and submitted to the graduate school (SPS) before March, 1979. No further requests for assistance in this EOPS area have been received.

5. Development of Software and Courseware (\$90,000)

A large array of products has been developed or adapted by the Technical Assistance Team. Some are short, terse treatments of technical matters, e.g. oscilloscope readouts, while some are full-scale users manuals, e.g. Media Production Techniques. A listing of these products is attached to this report. The list also includes representation of Technical Assistance Team prepared/documents which were directly tied to a TKPK project output demand, e.g. papers on the Open Junior High School, and were requested by TKPK/BP3K personnel.

6. Short-term Training (\$77,000)

Various efforts in the skill training areas of educational TV program production, sound/slide production, equipment maintenance, script writing, and radio program production (see attached list). These training services have included approximately 550 participants representing local and regional educational officers, and higher education personnel. Third-country training has been accomplished or is planned for Singapore, Republic of Korea, and Malaysia. Four persons have been funded for such training using locally managed funds from USAID #497-040, and 14 persons from other sources. Ten additional persons were sent to Kuala Lumpur for production training and 2 persons to Republic of Korea for Open Education training. Fulfillment of Third Country short-term training plans is difficult due to the limited number of opportunities present and the small number of individuals training sites can accommodate at one time.

The current priority of the project (TKPK) would seem to be very high considering four indicators. First, the President's Decree making official the establishment of the Center for Communication Technology for Education and Culture (PTKPK) was made public on 27 September 1978. That decree incorporated the former TKPK project into the line organization of the Ministry, reporting directly to the Minister. Second, the project was previously entrusted with the overall responsibility for planning, designing, developing and implementing the Open Junior High School experimental project which has a very high national priority. Third, the yearly budget

allocation directly to TKPK has been substantially increased, as well as have been the indirect allocations which flow from the respective Directorates General of the Ministry of Education and Culture. Fourth, the Ministry of Education and Culture presented a strong supportive speech for the TKPK project, the future PTKPK, and the future use of E.T. in Indonesia during the National Conference on Education Technology (July 18-21) in Jakarta. USAID Jakarta shares the high priority status of the project given its recent efforts to provide grant/loan funds for the institutional development of PTKPK. In the project, the priority and common perceptions have been manifest in actions such as: (1) TKPK has assigned Technical Assistance Team members to tasks in preparing for USAID Project Paper and PID development efforts, (2) USAID interest and follow-up with the various aspects of the current project has been active, (3) TKPK high use level of Technical Assistance Team has continued and (4) USAID Mission made the decision to support early funding of PTKPK, (5) BAPPENAS has established a high priority for the development of Education Technology.

18. Purpose

To establish the institutional capability to manage and implement a nation-wide educational technology program for eventually extending services to the rural and remote areas of Indonesia. Progress toward each End-of-Project Status (EOPS) condition are assessed as follows:

1. An improved capability of TKPK to implement its functions in providing services to Directorate Primary/Secondary; Directorate Non-Formal Education; Directorate Higher Education; and, special projects.

Capability levels sufficient for interim operation has been established relative to the functions of planning, systems development, systems analysis, production, and evaluation. The existence of a representative cadre of trained people in each of these areas, where few or none existed before, is evident. The skill levels manifest in those professionally trained individuals is reflected in the products associated with each of those functions. Representative of such capability, where none existed before, in the production function, are film and television production units. PTKPK's establishment as an on-going organizational unit within the Ministry of Education and Culture provides structural and mission parameters which strengthen its operations and management capability. This last element was enhanced by the in-house development of an output-based FY management system. A facility, specifically designed to support the functions has been occupied by project personnel and plans exist to equip it

for production, and support, thereof, of a professional level relative to all forms of educational media. Having realized these developments through continued effort, training, and technical assistance, the organization has achieved a baseline institutional capability such that advancement to the capability levels described in the original planning documents would seem plausible and feasible given a major thrust such as represented by the proposed USAID/GOI four year development project.

2. A functioning graduate program in Education Technology at IKIP Jakarta

IKIP Jakarta has planned, installed and operated a program leading to a Magistar (Masters) degree in the period since December, 1977. None of these conditions existed in November, 1977. The program has undergone significant development efforts resulting in specific syllabi for all courses, organization of a media support unit for the institution, training of 4 faculty members to the Masters Degree level, installation of physical facilities and some equipment for audio recording and video recording and CCTV, equipment for utilizing media has been significantly upgraded, technical staff have received training in its maintenance and use, skills of the support services personnel have been upgraded, and recommendations for operation and future action have been formulated. The program has a capacity for simultaneous enrollment of 20 students in each of its two years. Of the 20 students presently enrolled, 15 should receive the Magistar degree during calendar year 1979, as they passed comprehensive examinations and are in various stages of these implementation. The program enjoys support of the leadership of IKIP and is seen as a resource for further institutional development. At present, the program leadership and PTKPK leadership are cooperating in the integration of their respective missions in areas of obviously shared interests. In summary, the program has established a satisfactory interim operating status and looks to achievement of desired levels through realization of existing plans during Repelita III.

3. Application of education technology in seven universities

Personnel in seven universities received in-country and out-of-country training in Education Technology. As a result all seven universities are in various stages of introducing facets of education technology in classroom teaching.

19. Goal/Subgoal

The Republic of Indonesia is determined to expand the educational services and improve the quality of education available to its citizens. Progress toward this goal is evident in the provision of more school buildings, more teachers, new learning materials, and increased opportunity in nonformal education.

TKPK, as a national project, has given major support and made significant contributions to the accomplishment of this goal. By supporting TKPK, the GOI/Syracuse effort also contributes to accomplishment of the national purpose.

The sector goal relevant to this project is "increasing the educational opportunities available to Indonesian people." The Education Technology project is a capability building effort which should increase TKPK/GOI ability to utilize educational technology in providing increased educational opportunities to all its citizens through formal and non-formal educational programs. Status of progress toward the goal is improving through efforts like INPRES school program, "crash" program in teacher education, expansion of PENMAS nonformal education capabilities under the World Bank Project, and GOI programs such as Project PAMONG, Developmental School Project, and Open Junior High School Project. Enrollment figures and application/program entry ratio figures from BP3K would furnish specific evidence of progress toward this goal.

Progress toward this goal in the Education Technology project is not designed to be direct. Through the capability building effort involved, the ability of TKPK to support "opportunity-creating projects" should be directly increased, thereby indirectly increasing the levels of opportunity available.

20. Direct and Indirect Beneficiaries

In a capability building effort, it is perhaps presumptuous to list general beneficiaries of that growing capability. Similarly, it is difficult to enumerate multiplier effects where TKPK has trained persons from other parts of the education system (e.g. PENMAS; training for learning group leaders) and to estimate their effect upon their ultimate audience or clients enrolled in their programs. In the listing below, we have been concise in cases where numbers of people are known, and have not been presumptuous when those numbers are unknown.

1. Individuals enrolled at Syracuse; 20; MS Degree; greater skills professional advancement
2. Individuals enrolled IKIP Jakarta; 20; Magistar Degree; professional advancement; greater skills

3. TKPK Project Staff; 53; new skills; training materials; 3rd country training
 4. IKIP Jakarta SPA; 20/year; graduate program in ET developed
 5. Indonesia education system; SPS ET Program; ET capability in Indonesia; manpower source
 6. Enrollees in TKPK workshops; 550; direct training and technical assistance with workshop output
 7. Enrollees in PENMAS Programs; 38; skills and materials developed by their program leaders through TKPK workshops
 8. Students in IKIP classes at Jakarta; Bandung; Surabaya; 60; materials developed by their faculty members in TKPK workshops
 9. Syracuse International Students; 3,000; improved orientation program prototyped with Indonesian students
 10. Traveling tutors (P3D elementary upgrading mobile training teams); 120; capability as trainers are improved, greater variety of useful training materials especially having impact in remote areas of Irian Jaya, Maluku, East Kalimantan, West Kalimantan, South Sulawesi, East Java, West Java, through more precise identification of learning needs upon which future radio broadcasts can be based.
21. Unplanned Effects
- None
22. Lessons Learned
1. All Technical Assistance Team members need more than "walking around" competence in the native language.
 2. Counterpart relationships should be specifically identified and, if all possible, counterparts should be officed together.
 3. The level and quality of information interchange among counterparts is likely to be the baseline from which independent and cooperative work efforts begin, proceed, and are evaluated. Time invested to integrate personnel on a personal basis is time well spent and should be formally provided for in project planning.

4. Insure that lines of reporting and information release are clearly defined and followed.
5. Identify specific outputs desired by the host country early in the project; define them as independent, counterpart-based, or additive, efforts.
6. If work sites and project outputs are related to more than one organization (project, institution, division) specify total number of person hours per time interval (week, month, semester) to be logged at each site.
7. In advance of arrival in host country, Technical Assistance Team should receive a full briefing by host country personnel describing; (1) daily operations at work sites, (2) work style preferred, (3) specific projects and outputs and inputs the host country contractor will be expected to produce output for during the term of the project, (4) specific bibliography of readily available resources related to the scope of work, (5) specific indicators for desired EOPS relative to each project objective, and (6) which of the above parameters are fixed and which of them should be the objects of extensive assistance efforts.
8. Become well informed about export/import operations of the host country. Such information can be invaluable if project accomplishments are dependent upon obtaining goods from outside the host country.
9. Flexibility is necessary for carrying out a program or a contract, so that more attention can be paid to the situation and its development. This can be done by establishing periodic as well as ad hoc reviews. For people who do not have any hands-on experience in carrying out a contract, especially those who come from a different cultural background, it is really difficult to grasp the exact mission that is to be accomplished.
10. Regional resources in Asia are known to be capable of playing an important role due to similar cultural backgrounds and the same level of technological development. However, it is also realized there is a limited capacity of the regional resources to absorb additional burden such as training. It is advisable, therefore, to arrange reciprocal training programs in which experts from both sides can render mutual help and should not merely be in the form of formal training programs.

23. Special Comments or Remarks

Given that this is the first project of this nature undertaken and managed by TKPK, they have done a more than credible job of overall administration. Syracuse University has attempted to be responsive to TKPK desires. The particular group of students for long-term training have been outstanding by any measure. The logistical arrangements for housing, transportation, physical work environment, clerical support service, etc. made by TKPK for the Technical Assistance Team, and further extended by IKIP Jakarta personnel, should be a point of pride where it is a point of contention in similar contracts in other countries. For its part, the Technical Assistance Team has conducted its work affairs professionally, and has sincerely tried to comply with every request for assistance received.

Cordial relationships and mutual understanding of demands and realities faced by all institutions involved in a project such as this are most useful. Cooperation is greatly furthered from this common basis rather than from that fostered by not having common understandings.

24. Impact re Section 102(d) Criteria

This project is an institution development effort to create a capability in Education Technology. As such, the project will not itself impact on criteria outlined in Section 102(d) of the FAA.

LIST OF SOFTWARE/COURSEWARE PRODUCTS

Organization and Operation of Instructional Support Services
AT-6 Satellite Technology Projects
Proposal: Using Satellite Technology for Nonformal Education
Materials Development for ETV
UNDP Cluster Proposal: Educational Technology
Behavioral Objectives Writing and Use
Transparency Sets: Introduction to Educational Technology
Transparency Sets: Criterion Referenced Testing and Program Evaluation
Competency Based Teacher Education: Paper and Transparencies
Workshop Evaluation Instruments
Management by Objectives and Instructional Improvement Programs:
 Paper and Transparencies
E.T. Task Cluster Inventory
Tape/Slide Evaluation: Technical Aspects
Materials Evaluation: Formative Phase
Handbook for Media Production
Model Modules; Print, Print/AV: AV only
Equipment Needed for Small Radio Studios
Organization and Production Plan for Television
Research Design for Open School Project
Instructional Module Design Criteria
Instructional Plan Analysis
Educational Technology Bibliography
Considerations for Persons Interested in Open School
Report Relevant to E.T. in Indonesia; an Annotated Bibliography
Formative and Summative Project Evaluation Plan: P3D Project
Television Studio Plans: IKIP Jakarta
Television Studio Plan: SPTN Surabaya
Educational Technology: Perils Promises and Pragmatics for its
 Application

The Use of Microteaching to Improve Instruction in Higher Education
Care and Maintenance of Photographic Equipment and Supplies in Indonesia
Animation Box Design
Project Plan for E.T. Dissemination in Higher Education
Project Plan for Media Production Support of Nonformal Education Programs
Ten Modules on AV Equipment Use and Operation (modified for Indonesia)
Simultaneous Implementation of Five Instructional Activities in a
 Language Laboratory: A Model Strategy
The Television Signal and Its Components (and Transparencies)
The Color Television Signal (and Transparencies)
Video Pick-Up Tube (and Transparencies)
Video Pre-Amplifiers (and Transparencies)
Video Processing
ITV Systems Distribution
ETV Key Personnel
Testing the Video System: Slide Series

Test Oscilloscopes: Slide Series
Classroom Use of Tape/Slide Productions (a Tape/Slide Production)
Syracuse University International Students Handbook (Special Indonesian
Version)
Modular Orientation Program for International Students
Types of Goals and Objectives in Education
The P.A.L. System
Characteristics of Effective Instructional Strategies
Evaluation of Mediated Scripts and Materials: Teaching Learning Components
UNESCO Modules on Introduction to Educational Technology (modified for
Indonesia and New Workbook)
How to Prepare Original Motion Picture Film for Printing ___ A and B Rolls
Tape/Slide Producers Handbook
Traditional Curriculum Literature and Educational Technology: Issues
for the Practitioner
Television Equipment Selection and Purchase Plan
Identifying Candidates for Advanced Tape/Slide Production Training
The Soundtrack in 16 mm Film Production
Critique of National Total Systems Planning Document
Critique of Open School Operational Design Concept Paper
Television Studio Lighting
Television Production Facilities: Basic Concepts in Preventive Operations
Maintenance (POM)
Television Production Facility: Environment Control
Television Facility Scheduling (and Transparency Set)
P.O.M. Logs and Procedures (and Transparency Set)
Test Oscilloscopes
ETV Organization and Management
ITV Equipment Use
Model Instruments for Open School Research

PROJECT TITLE: EDUCATION TECHNOLOGY NO.497-0249

I. Impact re Section 102(d) Criteria: (Explain How)

Increase Agricultural Productivity

Reduce Infant Mortality

Control Population Growth

Promote Greater Income Distribution

Reduce Un-Under Employment

And related criteria:

Strengthen/Create institutions which aid social/economic development

See PAR. 18.1

Improve condition of women: Social/Economic/Political

III. Benefit Incidence* (Please specify effect on women wherever possible)

A. Direct Beneficiaries

	(Number)	(Who)	(Where)
Income			
Labor			
Agricultural Production			
Education/Training/Management	20	Various	Syracuse University
	20	IKIP Lectures	IKIP Jakarta
	53	Project Staff	TKPK
	588	Various	Indonesia
Medical Treatment (Reduction of Disease, available facilities/services)			
Living Conditions Improved (water, housing, sanitation, nutrition, institutions, decrease cost of living)			
Provision of Power/Transportation			

Estimated Overall Total Without Double Counting 681

B. General Population in an Area that indirectly benefits from:

increased availability of food _____
 increased mobility in area _____ Overall _____
 general health improvement _____
 or overall economic improvement _____

C. People in Area not affected. Why?

D. People in Area adversely affected. How?

* Most of these figures are not mutually exclusive and many will include people who benefit in two or more ways.