

RADIO EDUCATION TEACHER TRAINING
FINAL REPORT

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RADIO EDUCATION TEACHER TRAINING IN NEPAL

Introduction

After thirty years of progress in establishing new schools and staffing them with trained teachers, many third world countries still need qualified primary school teachers. The challenge of providing quality education is great. The value of an educated populace is undisputed and absolutely essential to lasting development. Quality teaching is necessary to meet the goals of mass education.

The demand for teachers has increased as education has been made both free and compulsory. The need for teachers has increased as progress has been made in reducing the drop-outs among students even from grade one to grade two and from grade two to grade three. As the private sector has increased its growth and has attracted the best educated village citizenry into new positions, it is the local teacher who is often recruited, leaving the school to suffer. As parents have become more involved in the schools, there has been a greater demand for quality education.

What can be done to meet the need for teachers for the primary schools in the rural areas of developing countries? What can be done to positively influence the improvement of the quality of education? One approach is the Radio Education Teacher Training Project (RETI) in Nepal which was specifically designed to improve the teaching effectiveness of rural primary school teachers. What are some of the unique features of this program that have proved to be of interest and show promise of success?

The Government of Nepal, recognizing the potential for the use of radio in education, began working with USAID in 1972 to expand its capability in the use of radio. Southern Illinois University at Carbondale was selected as the institution to provide technical assistance and the Team Leader arrived in Nepal in 1978. The main objective established for the project was to develop and test a training program for untrained rural primary school teachers through the medium of radio reinforced by written, self-instructional materials and periodic workshops. This project designed and implemented a cost effective process for assisting teachers meet basic certification standards while continuing to live and teach in their villages.

Nepal, perhaps more than many developing countries of the 1980's, is still plagued by a limited transportation and mail system. The country, nearly the size of Illinois (about 500 miles long and 100 miles wide), consists of a plain area about 500 feet above sea level near India, a central hilly region with peaks reaching 10,000 feet, and a high mountain area covering the northern region bordering on Tibet. The rugged terrain and major river systems of the Himalayan region have hampered road and bridge construction. This in turn has limited the building of adequate teacher training centers. Education has tended to center in the capital of Kathmandu and new teachers trained there have frequently been reluctant to return to their villages; although much progress had been made in taking teacher training to the remote areas of the country, it has still been difficult to depute qualified teacher

trainers to these outlying areas. And at best the country was able to train around 400 - 500 primary teachers per year in residential or correspondence programs. Thus radio seemed to be an ideal medium to explore.

Radio has been used in a wide variety of educational programs around the world. However, there have only been a few radio programs designed solely to prepare teachers -- particularly untrained teachers with limited educational backgrounds who are already serving as primary school teachers.

The one national radio station, Radio Nepal, currently utilizes one medium wave and two short-wave transmitters to broadcast a single, commercial type program (news, music, special interest programs) throughout the country. It is estimated that 85% of the geographical area and 95% of the population is served. New equipment installed early in 1982 included a 100,000 watt short-wave transmitter (USAID) and two additional medium wave transmitters (Japan Aid) making it potentially possible to provide for dual programs with a significant amount of time devoted to both formal and non-formal education.

General Plan of RETT Implementation

The long range goal of RETT is to provide the facilities (Transmitter, antenna, recording studio, radio receivers) and staff (script writers producers, self-instruction materials writers, field supervisors, producers and technicians, and evaluators) to provide for the production of a number of radio programs in a variety of subject matter areas for many different audiences of differing ages and interests.

A project as comprehensive as this one required a host of minor projects conducted simultaneously and upgraded continuously over the life of the project. The major tasks related directly to the teacher training phase and the time table of implementation can be summarized as follows:

- | | |
|-------------|--|
| 1972 - 1978 | <u>Pre-planning</u>
Preparation of RETT Project Paper; Contract Approval by His Majesty's Government of Nepal, USAID/Nepal and USAID/Washington. |
| 1978 - 1979 | <u>Basic Development</u>
Arrival of Team Leader of Contract Team in Nepal. Organization of Policy Committee. Establishment of a base of operations, ordering of basic supplies and materials. |
| 1979 - 1980 | <u>Staff Development</u>
Arrival of four technical advisers. Beginning of staff development. Participant training initiated. General planning of curriculum and plan of evaluation. Initial preparation of selected scripts and self-instruction materials. |

- 1980 - 1981 Pilot Year for 117 Enrolled Teachers
Continued preparation of scripts and self-instruction materials with great stress on formative evaluation. Initiation of broadcasts once a week increasing these to three times a week by the end of the year.
- 1981 - 1982 First Full Year for 1,000 Enrolled Teachers
All scripts written and produced and all self-instruction materials printed for a year of 165 one-hour programs. Broadcasting increased to five times a week.
- 1982 - 1983 Full Operation for 2,500 Enrolled Teachers
First full year's program repeated. Additional scripts written for a total of 200 programs. Writers start work on a new curriculum and materials for current untrained teachers who are high school graduates. Transmitter (100,000 watt short wave) and antenna installed and 2,500 radios distributed. One supplementary book was added for the year 1982 and a summative evaluation of the 1981-82 and 1982-83 projects years was conducted.

Special Features

There have been several factors which have assisted this project to move forward.

1. The teachers enrolled in the project were told by the Ministry of Education if they participated fully in the program (listened to the broadcasts, read the manual, and attended the workshops) and if they successfully passed a certification examination, they would be certified and be eligible for a salary increase. This proved to be a strong motivator for conscientious participation.
2. The village teachers, who realized that they were being recognized in a special way, responded positively. They really appreciated the coveted radio and the chance to learn in their own homes.
3. Radio Nepal was proud of its current service to the entire country and looked forward to receiving new, valuable equipment. Even prior to the arrival of the new transmitter, Radio Nepal provided broadcast time through its current facilities during the prime time from 5:30 to 6:30 p.m. for RETT.
4. A total systems approach was used from the beginning to implement the program. Basic equipment and supplies were provided: transportation for newly appointed staff to go to work ten miles east of Kathmandu; a practice studio and access to various recording studios until the permanent studio was completed; selection and procurement of inexpensive but highly

serviceable radio receivers; testing of solar collectors and various battery sources of energy for the radios; procurement of suitable office equipment including typewriters, photocopier, duplicators and art supplies for the writers and artists; and accumulation of a library of curriculum materials, primary school textbooks, related teaching materials, examinations and evaluation instruments. Staff training and actual production of materials were conducted in a real life situation.

5. Staff development was a most crucial key to success. Those who were deputed to the project came from the Ministry of Education and the Institute of Education (Teacher Training College). Only two had had actual teaching experience for any length of time at the primary school level; none had had any previous experience in preparing radio scripts or self-instruction materials. Their own professional backgrounds stressed theoretical concepts and lacked practical applications to the classroom. Yet they were willing to learn and ready to give radio education a chance. Staff involvement in the project and personal commitment definitely increased over the life of the project. By the summer of 1982, the central staff consisted of fourteen writers, one administrator, three radio producers, one radio engineer, and two evaluators. They identified with the project and served it well.

Selected staff from the central office of the Radio Project and persons from Radio Nepal were sent outside the country for special training. In addition special in-country training was provided to junior technical assistants of Radio Nepal regarding basic maintenance of electronic equipment. Shopkeepers in various regions of Nepal received special instruction in simple radio maintenance. Field supervisors received training on how to conduct workshops, collect research data and provide face to face instruction. Evaluators learned basic procedures in preparing achievement tests and different types of questionnaires as well as simple, basic statistics.

6. Official support was extended from the Ministry of Education and Culture from the very beginning. As the Ministry gained in its understanding of the project and its long term benefits to education and as staff were trained to conduct the various operations on their own, steps were taken to institutionalize the program within the Ministry in the Curriculum, Textbook, Supervision Development Centre. Support was also solicited and received from the District Education Officers and the Zonal Education Officers of the five major development zones of the country. The uniqueness of the program and the availability of the program to other persons not formally enrolled who had their own radios sparked an interest at all levels of education.

7. The special backgrounds and interests of the technical advisors proved to be helpful. The Team Leader had been the primary education adviser on an earlier contract in Nepal. His contacts within the Ministry of Education and Culture, with former AID participants, and with local hire personnel made it possible to develop appropriate administrative routines within reasonable time frames. The evaluation adviser had also had previous experience in evaluation in Nepal and was familiar with the traditional examination system of the country. His contacts also helped in implementing the program. The self-instruction materials advisor and the script writing advisor both had had previous experience in developing countries. All were interested in helping to make the project a success not only in terms of its implications for Nepal but also as a possible model for other developing countries.
8. Both formative and summative evaluation was built into the project from the beginning. Each week a group of from five to ten primary teachers listened to preliminary tapes and read the accompanying lesson materials. These weekly sessions proved to be a most valuable part of the developmental program. They served as a motivating device to the writers to meet immediate deadlines. They provided valuable feedback on the appropriateness of the length of the materials and the clarity of the ideas presented. Data were collected to guide the writers and the radio producer in revising scripts and lessons and preparing new materials. The program of formative evaluation proved to be a most valuable tool for staff development as the technical advisors worked with teacher responses to help the staff improve their skills. The writers were quickly able to produce better scripts and accompanying self-instruction materials so that eventually it was necessary to field test only a sample of the new materials.

Special Concerns

The curriculum designed for the teachers enrolled in this program stressed the process of learning and the relevant skills and attitudes important for teachers to assist pupils learn and complete the prescribed curriculum for grades one, two and three. In addition it had to include topics which would enable the rural teachers to function more effectively as "an educated person, innovator and change agent."

Individual radio scripts and accompanying self-instruction materials were prepared in the subjects of education, language arts, social studies, mathematics, rural development, health, art, and physical education.

Each enrolled teacher was expected to listen to an hour broadcast five days a week for about ten months. In addition the teacher was expected to read the accompanying lesson which would take up to an hour's reading time. The broadcast consisted of two twenty-minute

periods of a given subject. The teachers were encouraged to try out in their classrooms the special teaching methods described in these materials.

The writers were taught to write in simple Nepali in a style spoken in the market place rather than in classic Nepali. Even though Nepali is the official language of the country, there are still many different languages and dialects spoken as a mother tongue throughout the land. Even though most primary teachers were expected to understand spoken Nepali, it was realized that reading and writing skills were frequently limited.

Electricity is practically nonexistent in rural Nepal. Solar collector panels were explored as a possible energy source for the radios. It was found, however, that regular D-size dry cells provided a more inexpensive and reliable source of energy. Solar cells might be a possible future energy source.

Ample time was planned for the delivery of radios, self-instruction materials, and primary school textbooks. This was an involved logistical process requiring extensive planning and the use of porters traveling several days with these supplies.

Operational costs had to be kept at a minimum, particularly for those items which would have to be supplied by the Government of Nepal upon the departure of the technical advisors and after all "start-up items" and capital improvements were completed. Unfortunately this meant that workshops which were an important element and in-class observations by field supervisors had to be curtailed. Self-instruction manuals had to be reduced in size.

Implementation of RETT

The Content of the Formal Instruction

The curriculum for the teachers was prepared based on what a primary school teacher should know to present the approved primary school curriculum to pupils in grades one, two and three. This included content information as outlined in the primary school texts plus additional background information to help the teacher become a more informed resource person. It had to include material to help the rural teachers function more effectively in the role of an "educated person, innovator and change agent" in their villages. It also included methodology and suggestions for improved classroom management which the teacher could use in the village schools.

The teachers were instructed on how to prepare teaching aids from local materials and encouraged to conduct special projects and field trips. New methods of teaching, including some "scripted instruction," were also included particularly in the printed self-instruction materials.

Seven project objectives were set forth for developing the curriculum:

1. The RETT Curriculum should be integrated with Nepal's education program.
2. The curriculum should be integrated with active ongoing development programs in other sectors which affect RETT teachers.
3. Teacher training should be based on improving teaching skills already present in the teacher's repertoire.
4. The units, scripts, and worksheets should be simple and practical utilizing only readily available classroom materials.
5. There should be some incentive for teachers to implement the RETT (improved) methodology in their daily classroom teaching.
6. Only teaching formats which have been tested and observed as being possible to implement successfully in rural schools should be included in the final set of materials.
7. RETT should leave behind a core of trained staff capable of developing new radio projects and revising existing materials.

The basic outline of the curriculum was designed by the joint effort of the various writers under the leadership of the self-instruction materials adviser. Specific objectives for each unit of instruction were prepared. The writers for the content area then wrote the radio script and the accompanying self-instruction unit based on these instructional objectives.

The major subject areas were Nepali Language, Education (teaching methods), Social Studies, and Mathematics. A script writer and a self-instruction material writer worked as a team to prepare each twenty-minute script and the reading materials (average reading time of one hour). For the minor subject areas of health, rural development, art and physical education, a single writer prepared both the script and the accompanying self-instruction materials.

Figure 1 shows the outline of the number of units devoted to each subject area.

Figure 1

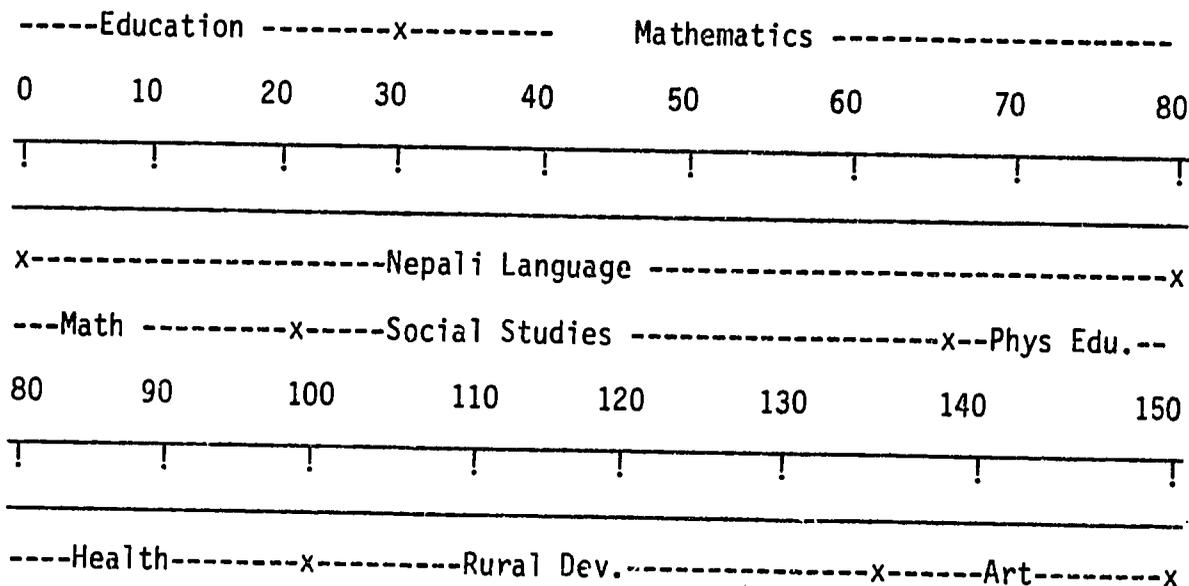
Distribution of Units in First Full Year (1,000 teachers)

Subject	Radio Lesson Units	Radio Time	Self-Inst. Mat.	
			Pages	Pct. Amt. of Total
Education	29 units	522 min	90 pages	10%
Nepali Language	80 units	1,440 min	250 pages	26%
Mathematics	68 units	1,224 min	220 pages	22%
Social Studies	41 units	738 min	150 pages	14%
Health	35 units	630 min	120 pages	12%
Rural Development	21 units	378 min	65 pages	7%
Art	15 units	270 min	45 pages	5%
Physical Education	11 units	198 min	35 pages	4%
Total	300 units	5,400 min	975 pages	100%

Figure two shows how this material was translated into a year's sequence with two subjects being taught each day.

Figure 2

Broadcast Days

Radio Program Production

The writers using the instructional objectives for a given unit prepared a tentative script in Nepali. It was then translated into English by a translator (not the author). This script was reviewed by the script writer adviser who made suggestions for its revision. These suggestions were given to the authors without translations. The author then revised the script and prepared it for the radio production staff. Final copies were typed in Nepali.

Scripts were initially recorded in a practice studio in the office of the Radio Education Teacher Training Project. Corrections were made to clarify ideas and keep the timing within the basic 20 minute pattern for a given instructional unit.

Special theme music was written and recorded for the total series and separate theme music for each subject content area and for the more informal "magazine show" section. Lead-in materials were prepared and a closing section containing announcements about future programs written. A series of informal magazine type programs were written for the middle twenty-minutes of each one-hour program.

Each section of the full one-hour program was then recorded in final form in one of several recording studios made available to the project prior to the completion of the studio building. These sections were then edited and combined into two thirty-minute tapes. These were then taken to the main studios of Radio Nepal for broadcast according to schedule.

Originally the programs were broadcast during the late afternoon. The enrolled teachers expressed their opinion that the best time for them to listen to the broadcasts was between 5:00 and 7:00 in the evening. Arrangements were then made to broadcast the RETT program on a separate frequency in the 90 meter band from 5:30 to 6:30 p.m., and later in the 60 meter band. The regular (commercial styled) program was broadcast simultaneously on medium wave and on the 31 meter band short wave. Since Radio Nepal had traditionally used all three frequencies for the regular broadcasts, persons other than those enrolled in the RETT Project frequently listened to the RETT radio programs.

Self-instruction Materials

In a manner similar to script writing, each self-instruction materials writer prepared a tentative unit in Nepali. They would set forth tentative ideas for sketches or cartoon type pictures to demonstrate concepts in the material. They wrote out sample exercises to promote learning in keeping with the unit objectives. The translator would translate the tentative materials into English and the advisor would make suggestions for their improvement. A revised version was then typed in Nepali and a special artist would finalize the accompanying sketches and drawings. The style of these drawings was based on field research completed by UNICEF on the type of drawings which communicated best in Nepal. This tended to be a simple style but not "stick men" drawings. Photo copies were made for pretesting the materials each week. Teachers who came in each Friday to read the materials made comments and suggestions and circled words they did not understand. Final copies of the revised materials were then sent to a printer who prepared books from off-set plates.

Since it was necessary to print and distribute the self-instruction materials (SIM's) in advance of the broadcasts, the writers for these materials had to complete their writing ahead of the script writers. This meant that the materials in the self-instruction manual (SIM) often dictated what was included in the script. It also provided the script

writer with the advantage of stressing a particular point or augmenting it with added information not found in the written material. The script writers had some flexibility in being able to write or rewrite a script nearer the time of the actual broadcast.

As time progressed and the writers became more proficient, not all scripts or self-instruction materials were field tested or translated into English for review. A special team of Nepalis continued to review these materials for general clarity, correct grammar and spelling. The advisors then spent more time in introducing broad concepts and refining teaching methods for particular topics.

By midway through the 1981-1982 year the manuals were written, edited, and final copies were distributed at a mid-year workshop. The full series of four manuals was revised and printed with copies for 6000 teachers. Copies were distributed in May of 1982 for the 1982-83 year and the 83-84 years. Subjects were arranged as follows:

Nepali Language
Mathematics
Education
Social Studies
Arts
Health
Rural Development
Physical Education

The central staff of the RETT was responsible for printing and distributing the materials. During the Pilot Year when the materials were still being written, portions of the materials were delivered during the year at the time of periodic workshops. The writers revised portions of these materials for the first full year which were then printed for delivery at the Orientation Workshop for the 1982-1983 year. Supplemental materials were delivered at mid-year. By the beginning of 1982-1983 all materials for two years of instruction, were printed in time to be delivered to all 75 centers.

Formative Evaluation

The writers for this program had never prepared radio scripts or self-instruction materials. Most had never taught in a primary school and many had never lectured in the Institute of Education. The concept of developing a set of instructional objectives and then preparing materials to help the enrolled primary school teachers reach these objectives was completely new. At first the writers had no concept of how long a script should be for a twenty-minute unit of instruction. Nor did the self-instruction materials writers know how long a written lesson should be if the average teacher was expected to spend about one hour in outside reading.

At first materials were taken to a group of teachers in a rural area near Kathmandu for field testing. Here the writers could observe the reaction of the teachers to a recorded script and to reading self-instruction materials. This time consuming process was modified so

that a group of ten teachers were paid a small stipend to come to the office of the Project each Friday. Here they listened to a script and read the accompanying self-instruction material. The evaluation team collected information on the time required, the reactions of the teachers, and the effectiveness of the materials through the use of a pretest and post-test based on the unit of instruction.

These weekly sessions proved to be most valuable in a variety of ways. They served as a motivating device to the writers to meet more immediate deadlines for their writing. They provided immediate feedback of the appropriateness of the length of the materials and the clarity of the ideas presented. They provided information on whether any words were not understood and whether the material seemed to be of interest or not to the sample of primary school teachers. A variety of data was collected for use by the writers and radio producers to guide them in revising materials and preparing new scripts and manuals. The feedback was most valuable in staff development. Gradually the writers were able to produce better scripts and accompanying self-instruction materials so that eventually only a sample of materials was being field tested.

During the Pilot Year further data were collected from the 117 enrolled teachers which provided valuable information for the writers and radio producers.

There was concern about the speed of speaking and the clarity of those speaking on the radio. There was also concern as to whether the teachers could read the written materials and whether they felt the cartoons and illustrations were appropriate. The evaluation team and field supervisors collected information about the reaction of the enrolled teachers to the total program during the Pilot Year.

New methods of instruction, sample games, and special classroom projects were field tested in a primary school near the RETT office. Directions were clarified and revised and programs which seemed to be successful were included in the RETT curriculum. Only techniques which could be implemented by the primary school teachers were included in the RETT program.

Summative Evaluation

The final summative evaluation of the actual achievement of the enrolled teachers was conducted in June, 1983.

An exam committee was established and all the rules and regulations for the exam were prepared. A confidential approach was followed for writing exams. Three sets of questions in each subject were prepared by experienced staff of MOEC, RETT and IOE. A moderation committee was established to moderate the questions and prepare a final set. The final set was used in all districts to administer the exam. The exam administration time and schedule were the same in all districts. A committee of experienced staff in all subjects was formed to examine the papers. Also a scrutiny committee for those examined papers was organized. Before distributing the exam papers to be examined, a group of

experienced staff was formed in each subject. Each group studied a sample of the answer sheets and decided on what standards the papers should be examined. (But it did not cause a problem for the minimum required percentage.) The distribution, administration and all other activities of the exam were equivalent to the S.L.C. exam.

Staff Development

Staff development was stressed from the very beginning of RETT and this included everyone associated with the project. If radio education were to have a long term benefit, it would be necessary to have local Nepalis qualified to carry out the many details associated with such a complex process long after the advisors left the scene.

In-country staff development. The original project paper called for a total of 121 person months for long term and short term advisors. This was expanded to a total of 150 person months through a series of amendments as outlined below:

	<u>Long Term</u>	<u>Person Months</u>
1.	Team Leader/Teacher Education	52
2.	Radio Production Specialist	21
3.	Self-Inst. Material Specialist	32
4.	Evaluation Specialist	18
	Total Long Term	<u>123</u>
	<u>Short Term</u>	<u>Person Months</u>
1.	Junior Tech. Assistant/Radio Nepal	9
2.	Rural Radio Maintenance Training	2
3.	Supervisory Training	2
4.	Language Curriculum Training	2
5.	Transmitter/Antenna Bidding	1
6.	Studio Maintenance Training	2
7.	Self Instruction Training	1
8.	Project Cost Survey	1
9.	Administration Support	1
10.	Evaluation Training	3
11.	Self Evaluation/Curriculum Training	2
12.	Transmitter/Antenna Training	1
	Total Short Term Training	<u>27</u>
	Total Long Term & Short Term Training (person months)	<u>150</u>

These advisors worked closely with Nepali personnel assisting them to learn new skills and to use related skills in new situations. Many formal instructional sessions were held. The advisors also worked on an individual basis with various members of the Radio Education Teacher Training Staff. The script writers received some instruction in radio production to aid them in including in their scripts appropriate instruction for the use of music, fades, and special effects.

The central core of field supervisors were instructed on ways to conduct workshops for their supervisors and enrolled teachers. Thus it was expected that field supervisors throughout the country could instruct teachers about the use of the radios and self-instruction materials. Field supervisors were also taught how to collect basic data useful in evaluating the project.

Almost all of the central staff of RETT and three Engineers of Radio Nepal completed out-of-country training as USAID participants. A total of 148 person months of training was completed as follows. Several persons from Radio Nepal, the Institute of Education and the Ministry of Education and Culture completed observation tours.

	Person months	Persons
A. Study tours of one month duration	10	10
B. 3 month study tour in Asia	21	7
C. Short term training in USA	51	17
D. Long term training in USA	14	1
E. Special training - Radio Nepal	54	3
	<hr/>	<hr/>
Total	150	38

Equipment

The basic equipment utilized in this project included one 100,000 watt shortwave transmitter and accompanying antenna, a complete set of equipment for recording tapes for broadcast use, 2,500 radio receivers, two vans, one automobile, and necessary office equipment. In addition the project did test a solar-cell panel coupled to a lead acid battery as a possible energy source to operate the radio receivers. A studio-office building was also constructed to house the recording equipment and provide space for the Project staff. Modifications were made in the current transmitter building of Radio Nepal to accommodate the new transmitter.

Transmitter and Antenna. The procurement of the transmitter and antenna was originally a separate project financed directly by USAID/Nepal. Southern Illinois University was asked to assist in writing specifications and collecting bids. The University did complete final negotiations and conducted the final inspection of the facilities after installation. The Harris Electronics Corporation of Quincy, Illinois, was the successful bidder for the transmitter and antenna. It should be noted that Radio Nepal already had one Marconi Transmitter and one Harris Transmitter. It seemed to be reasonable to provide Radio Nepal with a second Harris Transmitter since the engineers were already familiar with its maintenance and this would also minimize problems associated with a stock of spare parts.

The antenna was located in the same area as other radio towers in Kathmandu located specifically at Kulmataar just south of the city.

Installation took place in the late summer of 1982 under the supervision of representatives from the manufacturer.

Radio receivers, batteries, and solar cells. The radio receiver that was selected for the Project was one developed and manufactured by the International Telephone and Telegraph Company (ITT) in Penang, Malaysia. It had originally been designed for UNICEF as PLS Model 68. It included a medium wave band and two short-wave bands (3.1 to 7.2 and 9.3 to 18 MHz). The quality of reception of this radio was compared with several other models of radios available on the market. The quality of reception exceeded that of all other radios tested. It was definitely below the cost of other radios with a delivered price in Kathmandu of just over U.S. \$25.00. Each radio was checked to determine if it operated properly prior to taking it to the field. A small wooden plug was inserted in one switch to keep the radio in the "radio mode" rather than for phonograph input. This nine-volt radio was powered by six "D-size" dry cells. A wide variety of such dry cells were tested and it was found that one set of medium quality batteries would operate the radio for over 200 hours of listening time (6 hours a day). Thus it was estimated that two sets of batteries would more than be enough for the 300 hours of broadcast time in the program plus additional time for news and educational programs broadcast by Radio Nepal. Each teacher enrolled in the project through 1983 was given two sets of batteries. But it is not possible to use the same battery throughout the year. So only a dozen batteries to the teachers were insufficient. Though two sets of batteries were given to each teacher they had to buy more batteries. Those who tried to use the same set throughout the year made their radio unworkable and returned to RETT with jammed batteries.

The solar cell panels and the lead acid battery proved to be a possible source of energy for the radio. Several radio sets have been operating satisfactorily for several years, using this source of energy. However, this external source of energy was difficult to assemble in the field and was not a satisfactory source of energy for several reasons. It was difficult to use the radio as a portable radio with this unit. It was very easy to damage the solar cells if they were connected wrong to the battery. The estimated cost amortized over 15 years seemed excessive as compared with the cost of dry cells which were easily available in the markets throughout Nepal. If the cost can be reduced and if the solar cells can be placed in a more portable unit, such should be considered in the future.

The radio receiver was tested in all parts of Nepal at various elevations. It was possible to receive the signal of Radio Nepal at every place a test was made. The signal was clearest in the evening hours. It was found that the built-in antenna for medium wave and the telescope antenna for shortwave were sufficient for receiving the broadcasts from Radio Nepal, thus no effort was made to teach the teachers how to put up an external antenna.

It should be noted that Nepal is acquiring two additional medium wave transmitters and antennas through Japanese AID. One will be located in Kathmandu and another in Pokhara a hundred miles west of the capital city. This combination of transmitters will permit Radio Nepal

to begin dual programming -- one the regular commercial type program (music, news, special interest programs) and a second program with major emphasis on education both formal and non-formal.

Studio-office Building. The new recording studio-office building is located at Sano Thimi about ten miles east of Kathmandu. It is located in an area which includes the Institute of Education, the Janak Educational Materials Organization (printer for all government textbooks), and the Science Materials Center. Since the Radio Education Teacher Training Section is a unit of the Curriculum, Textbook, Supervision Development Center of the Ministry of Education and Culture, and since there is an alternate studio in one of the buildings of this complex, this location makes an ideal place for the RETT Section. The total resources of this area in terms of specialists and library materials will be the best in all of Nepal. This building was designed and constructed through contracts issued to local architects and contractors by USAID/Nepal.

The studio and control room will provide ample facilities for the required recording only after the two rooms can be adequately air-conditioned. It will be possible to use this studio as a live broadcast facility with these modifications. The recording equipment is the latest and best available based upon the recommendations of the Radio/Television Staff of Southern Illinois University at Carbondale. A tape library room is already in place and all of the 30-minute tapes (2 per one-hour program) are on file ready for transfer to Radio Nepal according to the schedule for the year.

Offices are available for the various writing teams, the evaluation team, the Director of the Project, the typists (for scripts and self-instruction materials) and a Project Library.

Other Equipment. Two vans for the transportation of staff have already been turned over to the Nepali staff. A compact sedan was turned over to the Nepali staff when the advisors left the project.

Institutionalization of the Project

One of the objectives of the Radio Education Teacher Training Project was to develop a viable organization and then to make sure that it became an integral part of the ongoing structure of the Government of Nepal in a manner that would assure its continuation after the technical advisors left the country.

There were several alternatives considered for the administrative home of the Project. The Institute of Education had been charged with all training programs for teachers including the B-level Curriculum for which only a seventh or eighth grade education was required rather than SLC pass (high school graduation). During 1980 Tribhuvan University began procedures to divest itself of all programs where the admission was less than SLC pass. Thus steps were initiated for the Ministry of Education and Culture to supervise such programs in education; and this included the Radio Education Teacher Training Project.

The Ministry of Education and Culture seemed like a reasonable unit through which to administer the program. After discussion it seemed best to place it under the Curriculum, Textbook, Supervision Development Center. The Director of this unit had been made Director of the Radio Education Teacher Training Project. This Center had already been involved in developing a series of in-school broadcasts to augment classroom teaching in a limited number of subjects. It was also involved in writing and producing a bi-weekly education information program broadcast over Radio Nepal. This unit was already directly involved in supervising the field supervisors throughout Nepal; these supervisors had been a vital part and would continue to be an important part of RETT. The writers often needed access to the resource library of this Center and to the ideas of staff responsible for writing and editing the various primary textbooks.

Because the long term goal of the project was to provide a wide range of educational programs, both formal and non-formal, it did not seem best to place the Project under Radio Nepal. Thus the Advisory committee to the Radio Education Teacher Training Project recommended and the Minister of Education and Culture accepted the recommendation that the Radio Education Teacher Training Project be made a regular Section of the Curriculum, Textbook, Supervision Development Center.

In the Fall of 1981 when the office moved to the new studio-office, space was made available at Harihar Bhawan for the Team Leader and the general Office Supervisor for the business aspects of the RETT Project which were related to the Southern Illinois University contract to provide advisors and consultation assistance. This was in an office near the main office of the Curriculum, Textbook, Supervision Development Center (CTSDC).

Research and Evaluation

As has been noted in previous sections of this report, various research and evaluation studies were conducted to assist in refining the project and providing important information relative to its evaluation. Below is a summary of the highlights of the research completed through February, 1983.

1. Learning by means of radio and self-instruction materials.

Controlled studies using pretest and post-test evaluations showed that teachers could learn from a recorded cassette (or broadcast) program and that teachers whose mother tongue was that other than Nepali could learn as well as those whose native tongue was Nepali.

Pretest and post-test evaluations of 117 teachers enrolled in the Pilot Year showed significant gains in scores as a result of formal instruction using radio and self-instruction materials.

The pretest data already collected is expected to show improvement for those teachers who completed a full year of training.

Teachers indicated that they thought they were teaching more effectively as a result of being enrolled. Field Supervisors noted definite improvement in the teaching skills of the enrolled teachers. Independent observers noted that the enrolled teachers were actually making use of new teaching techniques in their classrooms that had been taught through RETT.

The teachers enrolled during 1981-82 were about equal in Nepali, mathematics, and social studies as measured by a special Achievement test as were currently enrolled students in grade eight. This was true even though the teachers had completed grade eight as much as 25 years before in some cases.

2. Attitudes of teachers and Field Supervisors toward Radio Instruction.

Morale and general approval of the radio education program was high among the 117 teachers enrolled in the Pilot Year. Based on limited data from a sample of the 1,000 teachers enrolled during the first full year of operation, there was strong support for the concept of radio education and approval of the broadcasts and the accompanying printed lesson materials. It was indicated that a goodly number of persons not formally enrolled were also listening. The enrolled teachers liked the chance to learn in their own homes and still be able to continue their teaching.

Lower secondary teachers (a possible early target group for future training through RETT) showed a strong interest in and a willingness to participate in a program of radio education.

3. Evaluation of various workshops and training sessions.

Staff members enrolled in special staff development programs for writers, field supervisors, electronic technician, radio repairmen, and evaluation staff all indicated strong approval of the training they received. Participants who attended classes and special programs at Southern Illinois University at Carbondale all gave positive reports of their total experience.

The enrolled teachers during the Pilot Year and during the Year 1981-1982 expressed approval of the orientation workshops and the special training received there.

4. Equipment.

Broadcast signals from Radio Nepal, the national broadcast service, were received at all test centers throughout the country of Nepal at various altitudes from east to west. Shortwave reception was best in the early morning, late afternoon and evening hours.

Regular "D-size" batteries were available in the markets of all villages visited by members of the evaluation team.

Solar panels and lead acid batteries will operate the nine-volt radio for this project and can provide a steady and ample supply of power. Such panels are not easily moved from one location to another reducing the portability of the radios. The cost is still expensive as compared to regular dry cells. Tests in other parts of the world using nickel cadmium batteries and less expensive solar panels may be worth testing for future use in Nepal.

Reviews made by qualified engineers following the installation of the transmitter, antenna, and recording equipment showed all to be properly installed and ready for regular service at standards above that initially prescribed for the equipment.

5. Need for Trained Teachers.

In 1978 there were 5,607 untrained Primary School teachers with less than a tenth grade education. The percentage of such teachers varied from District to District. With the increases in the number of schools and the number of primary students the actual percentage of trained teachers has been going down slightly since 1979. Thus there is a genuine need for a mass approach to training the current teachers who are untrained in order to have an impact on improving the quality of primary school education.

6. A description of the teachers enrolled in the Program.

The two major ethnic groups enrolled were Brahmin (29.9%) and Chhetri (28.1%). This was followed by Newar (9.4%), Magar (7.1%), and other smaller groups (25.5%). Most of the teachers fell in the age group of 21 to 40 with 21.8% in the 31 to 40 age group. Most were male (92.6%) and married (85.5%). Most (98%) had completed the eighth grade but not high school.

A total of 92% indicated that they spoke Nepali in their home. Most of their fathers (93.8%) were farmers. Over 40% held a second job in addition to teaching and of this group most were involved in agriculture (79.5%) or were housewives (12%).

Only 17.5% owned their own radios and most of the teachers preferred that the Radio Broadcast for RETT be at 6:00 or 7:00 p.m.

7. A description of the schools where teachers taught.

Based on the data supplied by the teachers during the first full year of operation one would typically find the Primary School for grades 1, 2, and 3 to have an average class size of 56 for grade one, 25 for grade 2, and 24 for grade 3. There would be three teachers in the school with two being male and possibly one being female. Each of the grades would meet separately. A given teacher would only teach certain subjects in each of the three grades (i.e. Nepali and Social Studies; Mathematics, health and P.E.) rather than a given teacher being assigned to a given grade and teaching all subjects as is the more typical pattern in the U.S.

The building would be constructed of stone and the building would be owned by the school. The building would contain three classrooms and one other room, probably an office for the headmaster. There would be a playground near the school and possibly some drinking water. There would be no toilet, library or hostel.

Progress of the Project, 1978 - 1983

The time required to fully approve the project by His Majesty's Government of Nepal, USAID/Nepal, USAID/Washington, and Southern Illinois University at Carbondale delayed the formal initiation of the project in Nepal until the fall of 1978. Once the project was approved and after the Team Leader reached Nepal, in October, 1978, the project moved ahead on schedule with minor variations in the projected time schedule.

The target goals for each year of the project were met or exceeded. During 1978-1979 the Policy Committee was established and several of the staff were selected and some in-country training took place. A research program was started. The office for the project was established and operating procedures were defined. Basic materials were ordered.

Two additional advisors arrived in May and July of 1979. A third advisor arrived in September of that year. Additional researchers and writers were assigned to the project. Participant training was initiated. General planning for the curriculum and the plan of study was initiated and in-country staff development programs were put in place. A few scripts and self-instruction materials were written and field tested.

By August 20, 1980 sufficient scripts had been written to initiate broadcasts for the Pilot Year of 1980-1981. An Orientation Workshop was held earlier that month for 117 teachers at which time base research data was collected. Self-instruction manuals were printed and delivered to these teachers. Once broadcasting was started, every broadcast tape

was submitted on time to Radio Nepal to be broadcast according to schedule. At first this was once a week. By February, 1981, this was increased to twice a week. During the following year, 1981-1982, this was increased to four times a week and then five times a week.

Sufficient self-instruction materials were written and revised to provide the 1100 teachers with sufficient manuals for 1981-1982. The writing staff completed participant training in the United States. The studio-office building was completed and the recording equipment installed and inspected.

By the fall of 1982, the 100,000 watt shortwave transmitter and antenna were installed ready for use. The final version of the self-instruction manuals had been printed and delivered to all 75 districts in order for 2,500 teachers to be enrolled during this third year of actual broadcasting during 1982-83. All 2,500 radios had also been received and distributed to the seventy-five districts. Plans had been approved to prepare 35 additional one-hour programs to augment the 165 one-hour programs that were on file ready for the year's broadcast schedule. Arrangements had been made to repeat the RETT Program as many times as necessary to give all untrained primary teachers who had not graduated from high school a chance to enroll in RETT.

In Spring 1983

1. A supplementary book was written for the 1983-84 training group.
2. Exam Committee was formed.
3. Exam papers written.
4. SIM for 1983-84 and exam for 1981-82 and 1982-83 distributed.

In Fall 1983

1. Exam conducted to all 1117 teachers.
2. Broadcast for 1983-84 group started.
3. Exam papers corrected.
4. Results published.

The Closing Months of the Project in 1983

The project continued through the academic year of 1982-1983 with over 2,000 teachers serving as active participants in the program. The Ministry of Education and Culture completed plans for administering a final Certification Examination with a test center in 69 Districts. The logistics of editing and printing the final examination were handled by a special committee under the general direction of the Radio Education Teacher Training Section of the Curriculum, Textbook, Supervision Development Centre. Instructions were mailed to test sites using regular mail. At the far distant centers, staff members from the Radio Education Teacher Training Section personally took internal flights and then walked to take the test materials in order to assure the proper security. Test booklets and answer sheets were also delivered by the

staff of the Radio Education Teacher Training Section using the office van and public transportation to all other sites reachable by road and by foot.

The external evaluation team began its evaluation in early March 1983. This consisted of Dr. Barbara Butterworth and Dr. Richard Martin of the United States and Dr. Prem Kasaju and Dr. Dibya Man Karmacharya of Nepal. The final report of the evaluation team was delivered to USAID/Nepal in June 1983. The main items in the final recommendations of this report included the following:

1. It is felt that AID should continue to support radio education in Nepal. The purpose, however, should shift from a training focus to the delivery of content information which the medium of radio is better able to convey with minimal support services. An appropriate target audience would be the same as RETT I, under SLC passin-service teachers, but with the purpose of providing upgrading in content areas, particularly Mathematics, Nepali, Science, and English. This is a need particularly recognized by the MOEC. In time, as the local educational infrastructure develops, radio may also be effective in conveying methods and other training related material.
2. Prior to the beginning of a follow-on project, the project must be assured of adequate institutional support to fully implement a program. Time must also be set aside to carefully design and pretest materials. The scope and pace of implementation must be realistic in light of the goals of the project which include curriculum and material development, and must recognize the capabilities of the existing communications network. It is felt that if these conditions are met, RETT II can be effective and serve to stimulate the use of radio for development in Nepal.

On the basis of this report, the original Project Paper for RETT II was revised under the general direction of Virgil Midema and Janet Ballantyne of USAID/Nepal. A final revised Project Paper is to be ready by March 1984.

During the summer of 1983, the Certification Examination was administered. Test books were sent to Kathmandu and the examination was evaluated in keeping with normal scoring procedures used for the National School Leaving Certificate Examination. The test included both multiple choice and essay questions. The report that was made available to the Project in the fall of 1983 indicated that over 65% of the teachers had passed the examination and were thus eligible for an additional training allowance in their salary.

A new group of teachers, numbering over 2,000, was enrolled in the RETT Program for 1983-1984. Additional self-instruction materials were printed and distributed to this group and these included additional curriculum materials recommended to be included in the program by the Ministry of Education and Culture. Some of the radio programs were rewritten and rerecorded in keeping with evaluations made during

1982-1983. The magazine sections of many of the programs were updated. Regular broadcasting for 1983-1984 began in August of 1983. The District Education Officers were asked to assist in reissuing the radios to new teachers enrolled in the program. It was hoped that by the end of 1983-1984 that all teachers originally identified in 1978 as being eighth grade graduates and untrained would have been enrolled in RETT. The Program was such that it could be repeated again in the future for newly appointed untrained teachers and those who had failed earlier certification examinations.

During the spring of 1983, Radio Nepal was able to make final adjustments with the transmitting equipment. The Chief Engineer for Radio Nepal reported to the Team Leader that the equipment was working perfectly. USAID/Nepal approved the air conditioning of the radio control room and main studio room at the RETT Project building at Sano Thimi. This work was initiated in 1983 and was to have been completed in early 1984.

The following staff assisted with the project as Team Leaders in 1983:

Donald D. Paige	- January and February
Jack W. Graham	- March, April, and May
Kathleen Goodman	- July, August, September, and October
Charles B. Klasek	- October

The SIU Office of the Project was closed in October 1983, and proper materials returned either to USAID/Nepal or to the campus of Southern Illinois University at Carbondale. All equipment and supplies were returned over to USAID/Nepal or to the Ministry of Education in keeping with the terms of the contract.

A special closing ceremony was held in Kathmandu on 9/29/1983 at which time Dr. Albert Somit, President of Southern Illinois University at Carbondale, was present. A number of special citations were awarded to those most closely associated with the Radio Education Teacher Training Project.

The program was institutionalized in 1981 placing it fully within the Curriculum, Textbook, Supervision Development Center of the Ministry of Education and Culture. Assurances were given by the Ministry of Education and Culture that the program would continue in an effort to meet the educational needs of Nepal.

Research evidence collected and reported in a series of over 64 reports indicated that the teachers liked the program, appreciated the chance to learn in their own homes, and felt that they were teaching more effectively as a result of being enrolled in the program. Outside observers noted that the teachers were actually using some of the new teaching techniques in their classes. Field supervisors noted that the teachers had definitely improved in their overall teaching skills and in a number of specific areas.

A total of 22 participants completed special training in the United States. Five received radio production training in the Asian Institute for Broadcast Development in Kuala Lumpur. These individuals plus other staff assigned to the project received extensive training in their various specialties while working on the job. It is felt that even though there is still much that the staff can learn to produce even more effective programs in the future, the individuals are capable of continuing the program and of writing the materials for the next curriculum.

The data clearly show that the program of Radio Education Teacher Training is much more cost effective than the residential program. This is decidedly true in terms of continuing operation costs (not including the capital costs of transmitter, antenna, recording studio nor the capital costs of the various residential campuses).

Statistical reports from the Ministry of Education and Culture have shown a decided improvement in the number of schools, number of students and number of trained teachers from 1951 to the present time. The number of students registering to take the School Leaving Examination at the end of grade 10 had increased to over 80,000 in 1982. There has been some evidence that in recent years the quality of education has not improved and in some cases it has declined, particularly due to the crowding of classrooms and a lowering of the percentage of trained teachers.

It is hoped that the Radio Education Teacher Training Project can continue to point to a number of areas where the quality of education at the primary school level has been improved. It is through this improvement of education in grades one through three and soon in grades one through five that the quality of education at all levels can dramatically improve because of the strengthening of the foundation of the educational base among an ever increasing school population. As the educational experience in these early grades becomes more meaningful with a wider variety of helpful learning activities, it is hoped that the number of drop outs can be reduced in these early grades and that the learning skills of all the students can be increased so that the level of understanding and performance can eventually be improved at all levels of education.

Summary

Nepal has made steady progress in developing its educational program since the country became independent in 1951. It has been aided by a number of projects sponsored by USAID (amounting to over 20 millions of U.S. dollars) and support through a number of bilateral and multilateral agencies. The growth in education can be summarized as follows:

	1951	1975	1980
No. Primary Schools		8,314	10,130
No. Lower Sec. Schools	1,893		3,501
No. Secondary Schools		<u>479</u>	<u>785</u>
No. Total Schools	321	10,666	14,416
Primary Enrollment (Total)		458,516	1,067,912
Primary Enrollment (female)		84,008 (19%)	299,512 (28%)
Lower Sec. Enrol. (total)		174,143	391,427
Lower Sec. Enrol (female)		29,071 (17%)	80,089 (21%)
Secondary Enrol. (total)		67,214	121,007
Secondary Enrol. (female)		11,388 (17%)	21,613 (18%)
Total Enrol, (second total)	8,505	699,873	1,580,346
Total Enrol (female)	86	124,467 (18%)	402,014 (25%)
No. Teacher Prim. (total)		18,874	27,805
No. Teachers Lower Sec. (trained)		8,063 (43%)	9,971 (36%)
No. Teachers Low. Sec. (Total)		6,496	11,693
No. Teachers Lower Sec. (Trained)		2,300 (35%)	4,587 (39%)
No. Teachers Sec. (total)		3,451	4,683
No. Teachers Sec. (trained)		1,441 (42%)	2,919 (62%)
Total No. Teachers	640	28,821	55,985
Total No. Trained Teachers	20	11,804 (41%)	17,477 (31%)
Literacy Rate	2%	17%	19%

The University enrollment has grown from just a few hundred enrolled in the early 1950's to over 40,000 in 1980 and over 55,000 expected in the fall of 1983.

The total amount of money budgeted by the country for education from grade one through the University was Rs568,896.00 NC. in 1980-1981 or approximately US\$43,427,000.

The Government of Nepal, various agencies within Nepal, and several donor groups have become increasingly concerned with improving the quality of education in an effort to give greater meaning to the significant growth in terms of members. The improved use of radio to strengthen the quality of classroom teaching is one such effort.

Educators from several countries have expressed an interest in this project as a way of preparing teachers. This project has direct implications for other developing countries in which there is a shortage of well-trained primary school teachers.

The use of radio in education is well established. The unique program in Nepal to improve the quality of primary school education through the in-service training of untrained teachers has proved to be a valuable and well received program. The staff that has been trained to

carry out this program appears to be dedicated to continue the important work that has been started. There appears to be a willingness on the part of the Ministry of Education and Culture, USAID/Nepal and USAID/Washington to continue their support of the program to assure its continuation as a regular operation. It is hoped that this project will continue and be able to make a positive impact on the life of the people of Nepal.

Recommendations

The first difficult steps have been taken to introduce the use of radio to the educational program of Nepal. The demonstration project has shown that radio with the proper use of self-instruction materials can be helpful in the preparation of rural primary teachers and that they can be motivated to complete a specialized program for credit in which radio is used as the medium of instruction.

Several next steps are possible for the continued and improved use of radio in formal and non-formal educational projects in Nepal.

1. The present program designed for primary teachers should be continued until all untrained primary school teachers have an opportunity to enroll in the program and complete the special examination designed for the program.
2. A nine-month program should be designed to help prepare individuals to complete the School Leaving Examination. Special assistance should be given in terms of "borrowed radios" and newly developed self-instruction materials to primary teachers who have not passed the SLC. Other citizens should be permitted to order and buy the textbooks and to listen on their own radios.
3. A special coordinating committee should be appointed to assist in developing a long-range educational program through the use of radio and special self-instruction materials. There should be representatives from the various ministries that are now involved in preparing radio programs of an educational nature. Persons directly involved in developing new programs should share ideas on ways of developing improved radio scripts.
4. A special survey should be made of college classes and secondary schools to locate the special teachers who are above average in their class presentations. Such individuals should be encouraged to prepare special educational programs using radio.
5. A small committee should be appointed in Tribhuvan University to determine what two courses would merit being taught using the radio. Care should be taken in selecting the course or courses and the instructors who will prepare the scripts for radio presentation.

6. A special committee should begin work on designing one or two radio programs to augment the regular classroom teaching either at the lower secondary or secondary levels. Such a committee should work closely with some of the better schools in Kathmandu to develop a reasonable schedule that could easily be followed by the school system.
7. A systematic effort should be made to collect and record the many folk tales of Nepal and to establish a special program for children of children's stories.
8. Steps should be taken to teach Nepali by use of the radio and special written materials.
9. Inquiry should be made regarding the special program being developed in Kenya regarding the teaching of English through the use of radio and special materials. An early decision should be made to determine if such a course could be taught in Nepal.
10. Steps should be taken to start using the mathematics program developed in Nicaragua in grades one, two, and three to augment mathematics instruction in the classrooms of Nepal.
11. A program of publicity should be started in the various local newspapers about the several programs offered by means of radio for various groups in Nepal. Publicity about educational programs should be carried on the regular radio programs of Radio Nepal.
12. Radio should be used as a medium of instruction for the continuous upgrading of teachers. Three special in-service programs should be developed to assist teachers improve their methods of instruction and in working with special populations of students. The three separate programs would include those for primary teachers, lower secondary teachers, and secondary teachers.
13. The district education supervisors should make visits to the trainee's classroom. It is suggested that a classroom visit be made by school supervisors at least four times during the training period. This provides a chance for the teachers to clear up questions about procedures.
14. Some comprehensive research should be undertaken to determine improvements in the practicability and logistics of distributing and maintaining radios, batteries, textbooks, and other supplementary materials.
15. The one two-day workshop is insufficient to train the district education supervisors. This workshop should be expanded to at least a two-week program. This training is also important for the headmasters of participant schools. The following training format is recommended:

Kathmandu--Regional supervisors trained by the ministry of Education specialists.

Regional Education Directors--RED specialists train district supervisors.

District Education Offices--DEO supervisors train participatory schools' headmasters.

And, RED and MOE specialists should train all district education officers in the Regional Education Directorate.

APPENDIX A

Technical Advisors and Others From
Southern Illinois University at Carbondale
Involved in the Project

Long Term Advisors

Donald Paige, Team Leader	1978 - 1983
Jack Graham, Evaluation Adviser	1979-1980, - 1982
Kathleen Goodman, Self-Instruction Materials Adviser	1979-1981, - 1982
Julia Ledee, Radio Production Adviser	1979 - 1981

Short Term Advisors

Paul Caldwell, Electronics Advisor	1980
Arthur Aikman, Field Supervisor Advisor	1980
Margaret Matthias, Language Arts Advisor	1981
Charles Klasek, Self-Instruction Materials and Cost Effectiveness Researcher	1980, 1981
James McKeown, Transmitter and Antenna Bidding Consultant, Recording Equipment Consultant, transmitter and antenna inspector	1981, 1982
Mike Harpwood, Manufacturer's Representative from Harris Electronics Corporation	1980

Official Representatives at Times of Annual Reviews

1979	Frank Horton, Vice President for Academic Affairs and Research Charles Klasek, Director, International Education
1980	Elmer Clark, Dean, College of Education Charles Klasek, Director, International Education
1981	John Guyon, Vice President for Academic Affairs and Research Charles Klasek, Director, International Education

Other SIUC Visitors to Project

Arthur Casebeer, Professor of Higher Education	1978
Warren Brandt, President, SIUC	1978
Hiram Lesar, Acting President, SIUC	1980
Nancy Quisenberry, Associate Dean, College of Education	1980
James Quisenberry, Associate Professor, Curriculum, Instruction and Media	1980
William Matthias, Professor of Educational Leadership	1981
William Morey, Assistant Campus Coordinator, Radio Education Teacher Training Project	1980

Carbondale Staff - Radio Education Teacher Training Project - Nepal

Charles Klasek, Campus Coordinator, SIUC
 William Morey, Assistant Campus Coordinator
 Marian Truitt, Secretary 1979 - 1983
 Sally Baertschi, Secretary 1978 - 1979
 Lekh Nath Belbase, Shashimaya Shrestha, Madhav Sharma, Stanley
 Andrews, Chris Hendel, Graduate Assistants at various times
 during the contract.

Kathmandu FSN Contract Staff

- * Dwarika Shrestha, Senior Administrator
- Tej Raj Singh, Administrative Assistant
- * Hari Shrestha, Secretary and Administrator
- * Nani Kazi Thapa, Senior Driver
- Bhuvan Rajak, Driver and Junior Adm. Assistant
- Shishir Sthapit, Translator
- Nanda Maharjan, Clerk
- Sita Thapa, Cleaner

- * Still on staff in 1982

APPENDIX B
RADIO EDUCATION TEACHER TRAINING PROJECT

Staff Listing
November 1980
(*Staff as of August, 1982)

CENTRAL PROJECT STAFF

Project Director: Narayan Rajbhandari *Bhola Pd. Lohani
Associate Project Director: Mahendra Thapa *Mana Wagley
Course Development Coordinator: Prayag Man Shrestha *Shiva Satyal
Administrative Officer: Prem Giri
Note: Chadra Kiron served as Project Director in 1981;
Chada Nath Aryal served as Associate Project Director in early 1980.

POLICY COMMITTEE MEMBERS (Disbanded in 1981)

Secretary, Ministry of Education: T. B. Prasai
Joint Secretary, MOE: Iswar Pd. Upadhaya
Member Secretary, N.E.C.: Dr. Suresh Raj Sharma
Dean Institute of Education: Dr. Kedar Nath Shrestha
D.G., Radio Nepal: B. P. Shah
Deputy Secretary, MOE:
Associate Director, RETTN: Mahendra B, Thapa

INVITED MEMBERS

Project Officer: RETTN, PDIS, USAID: Steve Freundlich (1980-81)
Janet Ballantyne (1982-83)
SIU, Team Leader: Dr. Donald Paige
Note: Dr. Bert Newbry served as Project Officer from USAID/
Nepal from 1971-1980.

FIELD COORDINATOR

Coordinator: Arun Pradhan *Coordinator: Arun Pradhan

EVALUATION STAFF

Coordinator: S. M. Sakya *Coordinator: S. M. Sakya
Evaluator: Rajendra Pradhan *Evaluator: M. B. Pradhan
Evaluator: M. B. Pradhan

SCRIPT WRITERS

Nepali Language Arts: *Hom Nath Subedi *Shiva Prasad Satyal
Mathematics: *Rameshwor Shrestha *Rameshor Shrestha
Social Studies: *Haribol Khanal *Gajendra Lal Pradhan
Health: *Beena Rajbhandari *Shyam Atitti
Educational: *Mana Pd. Wagley *Sushila Sharma
Rural Development *Mukti Nath Chaudhari

SELF-INSTRUCTIONAL MATERIALS WRITERS

Nepali Language Arts: Shiva Pd. Satyal *Shiva Pd. Satyal
 Mathematics: Tara Man Shrestha *Raja Ram Shrestha
 Social Studies: Gajendra Lal Pradhan *Rampyari Shrestha
 Health: Beena Rajbhandari
 *Beena Rajbhandari
 Education: Sushila Sharma *Sushila Sharma
 Rural Education: *Mukti Nath Chaudhari
 Physical Education *Gajendra Lal Pradhan

RADIO PRODUCERS

Bam Bdr. Singh
 Mrs. Sarita Bhatta
 Murary Sharma

RADIO ENGINEER

*Subarna Man Pradhan

RADIO TECHNICIANS

*Pradeep Pd. Pant
 *Birendra Pd. Hada

OFFICE ASSISTANTS

Supervisor: Bhojraj Pant
 Accountant: Gajendra Sakya
 Storekeeper: Purusottam Neupane
 Office Assistant: Mrs. Ram Sundari Shrestha
 Librarian: Mrs. Manju Ghimire
 Memographer: Binod Giri
 Driver: Rabindra Nepali, Prakash Thapa
 Peon: Bidhi Lal Shrestha, Madhukar Thapa
 Peon: Tirtha Lal Maharhan
 Gardener: Laxmi Lal Manandhar
 Cleaner: Kali Poda

SECURITY GUARDS FROM AUGUST 1982

Harichandra Thakuri
 Chandra Bdr Ghimire

ILLUSTRATOR

Nabindra Man Rajbhandari
 Dhiresk Kr. Dahal
 Ashok Kr. Bhadel

TYPISTS

Kedar Thapa
Krishna Kumar Thapa
Bharati Shrestha
Krishna Kumari Shrestha
Sanubhai Tamrakar

APPENDIX C

RADIO EDUCATION TEACHER TRAINING PROJECT

Research Reports Prepared Under the General Director of the
Evaluation Section

1979

- No. 1 Kedar N. Shrestha, Bishwa Keshar Maskay, Rajendra B. Pradhan.
"An Investigation of the Comprehension of Radio Broadcasts by
Selected Primary Teachers in Sindhu Palchok District."
February 1979
- No. 2 Kedar N. Shrestha, Bishwa Keshar Maskay, Rajendra B. Pradhan.
"An Investigation of the Comprehension of Radio Broadcasts by
Selected Primary Teachers in Kavre Palanchok District."
February 1979
- No. 3 Kedar N. Shrestha, Bishwa Keshar Maskay, Rajendra B. Pradhan.
"An Investigation of the Comprehension of Radio Broadcasts by
Selected Primary Teachers in Dhading District." March 1979
- No. 4 Kedar N. Shrestha, Bishwa Keshar Maskay, Rajendra B. Pradhan.
"An Investigation of the Comprehension of Radio Broadcasts by
Selected Primary Teachers in Jagarkot District." March 1979
- No. 5 Kedar N. Shrestha, Bishwa Keshar Maskay, Rajendra B. Pradhan,
Tara Man Shrestha. "An Investigation of the Comprehension of
Radio Broadcasts by "B" Level In-service Teachers Enrolled at
Pokhara Campus." March 1979
- No. 6 Kedar N. Shrestha, Bishwa Keshar Maskay, Rajendra B. Pradhan.
"An Investigation of the Comprehension of Radio Broadcasts by
"B" Level Equal Access of Women Enrolled at Pokhara Campus."
March 1979
- No. 7 Kedar N. Shrestha, Bishwa Keshar Maskay, Rajendra B. Pradhan.
"An Investigation of the Comprehension of Radio Broadcasts by
Selected Primary Teachers in Nepal." March 1979
- No. 8 Jack Graham and Donald Paige. "An Evaluation of Solar Power
Generation During Monsoon Season." July 1979
- No. 9 Gautam Dhoj Joshi, Kedar Man Pradhan. "Attitudes of Lower
Secondary School Teachers Toward Teacher Training by Radio in
Nepal." July 1979
- No. 10 Jack W. Graham. "Evaluation of First Portion of the Writer's
Workshop, July - September 1979." October 1979

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*Office of the Vice President for
Academic Affairs and Research
618/453-5744*

November 5, 1984

Clayton Seeley
Room 3321A
ASIA/TR
Department of State
Washington, D.C. 20523

Dear Mr. Seeley:

Enclosed is the final report for Radio Education Teacher Training - Nepal. In accordance with the general provisions of Contract AID/ASIA-C-1352, I am herewith forwarding to you the final report.

Subsequent to the preparation of the final report, we received the enclosed Research Report, Number 65. This report summarizes the examination results of the participants. There are two items of note in this report.

First it reveals that about 40% passed all sections of the examination. But it also reveals that if the Nepali section of the exam had been dropped, 75% of the teachers }
would have passed the exam.

Sincerely,

A handwritten signature in cursive script, appearing to read "Charles B. Klasek".

Charles B. Klasek
Associate Vice President
(Services)

Enc:

CBK/nmp

Research Report No. 65

Some Facts and Figures

of

RETT Final Examination Result 1983

by

1. Shredha M. Shakya
2. Mukesh B. Pradhan

RADIO EDUCATION TEACHER TRAINING PROJECT

Curriculum, Textbooks, Supervision Development Centre

Ministry of Education and Culture, HMG.

Kathmandu, Nepal

July, 1984

TABLE OF CONTENTS

	<u>Page</u>
I INTRODUCTION	1
II PRESENTATION OF DATA AND ANALYSIS	3
III SUMMARY AND CONCLUSIONS	9

LIST OF TABLES

<u>Table No</u>	<u>Page</u>
1. Enrollment of Teacher in RETT (1980/81 to 1982/83)	3
2. Enrollment of Teacher by Sex	4
3. Comparison . of Examinees & Dropout of Enrolled Teacher.	5
4. Dropout of Enrolled Teacher by Development Sector	5
5. RETT Certification Examination Result (1982/83)	6
6. Number & Percentage of Teacher Passed in Different Subjects	6
7. Number & Percentage of Teacher Failed in Different Subject.	6
8. Number of Unsuccessful Teacher	6

CHAPTER-I

Introduction

The Radio Education Teacher Training Project was designed to train untrained, rural primary school teachers through the use of radio broadcasts reinforced with self-instruction materials and periodic workshops.

The project was initiated in the fall of 1978. By the summer of 1979 a staff development program was underway to prepare the script writers, the self-instruction materials writers, and the research team about their various responsibilities and required skills. The Pilot year to include 117 enrolled teachers was initiated in the late summer of 1980.

The teachers enrolled in this program were for the most part teachers who had received no special teacher training. They had less than a high school education. Most of them had completed at least the seventh grade.

During the full year of operation 1981-1982, nearly 900 new teachers from 27 districts were added to the 117 teachers who were asked to continue a second year. The program was expanded for 1982-1983 to include about 1800 teachers. It is then planned to repeat the program as many times as necessary to provide training for the approximately 6,000 untrained and under S.L.C. primary teachers in Nepal.

The first final examination (annual examination) was held on 12 th. June, 1983. There were all together eight subject papers for the examination such as.

Subjects	Maximum marks	Pass marks
1. Nepali Language	100	40
2. Mathematics	100	40
3. Education	50	20
4. Social Studies	50	20
5. Physical Education	25	10
6. Health Education	25	10
7. Art	25	10
8. Rural Development	25	10
	400	160

There are two parts on each subject. The first part paper consists of subjective questions and carries 80% of the total marks of the concerned subject. The second part paper consists of objective questions (multiple choice items) and carries 20% of the total marks. The combined scores gained by the examinees will determine whether he/she will pass or fail in the examination. Any candidate if he failed in any one of the eight subject papers is declared as failed.

Objectives

- (1) To findout total no. of examinees in final examination
- (2) To findout the enrollment of teacher by sex
- (3) To findout the dropout of enrolled teacher
- (4) To findout the no. of teachers passed & failed in different subjects

CHAPTER -- II

FINDING

The data that follow are based on Teacher bio-data received from different DEO office and final examination conducted on F.Y. 1982/83.

TABLE NO 1

ENROLLMENT OF TEACHERS IN RETTP.
(1980/81 to 1982/83)

<u>Development Sector</u>	<u>Number</u>	<u>Percentage</u>
1. Eastern	434	15.62%
2. Central	682	24.55%
3. Western	647	23.29%
4. Mid Western	663	23.87%
5. Far ,,	352	12.67%
Total :	<u>2778</u>	<u>100.00%</u>

According to the table No.1, the Central Development Sector had the highest frequency of 682 (24.53%) Then Mid Western Development Sector, Western Development Sector, Eastern Development Sector and Far Western Development Sector, had the frequencies of 663(23.87%), 647(23.29%), 434(15.62%) & 352(12.67%) respectively.

TABLE NO.2

ENROLLMENT OF TEACHER BY SEX

Development Sector	Male	Female	Total
1. Eastern	414	20	434
2. Central	643	39	682
3. Western	603	44	647
4. Mid Western	630	35	663
5. Far ,,	345	7	352
Total.	2635	143	2778
Percentage.	94.9%	5.1%	100%

The table no.2 reveals that out of the total enrolled teacher 2778(100%), the male teachers had the higher frequency of 2635(94.9%) but the female teachers had only the frequency of 143 (5.1%)

TABLE NO . 3

COMPARISON OF EXAMINEES AND DROPOUT OF ENROLLED TEACHERS

Enrolled Teachers	Frequency	Percentage
a) Examinees	2708	97.48%
b) Drop-out	70	2.52%
Total.	2778	100.00%

Above table shows that out of the total enrolled teachers 2778 (100%), the examinees had the higher frequency of 2708 (97.48%) but the dropout of enrolled teachers had only the frequency of 70 (2.52%).

TABLE NO. 4

DROPOUT OF ENROLLED TEACHERS ACCORDING TO DEVELOPMENT SECTOR

Development Sector	Frequency	Percentage
a) Eastern --	14	20%
b) Central --	20	28.57%
c) Western --	14	20%
d) Mid Western --	17	24.29%
e) Far ,, --	5	7.14%
Total	70	100%

Out of the total dropout enrolled teachers 70(100%), the higher frequency of 20(28.57%) was in the Central Development Sector followed by the Mid Western Sector the frequency of which is 17(24.29%).

TABLE NO. 5

REPT FINAL EXAMINATION RESULT

(1982/83)

<u>Development Sector</u>	<u>Passed</u>	<u>Failed</u>	<u>Total</u>
1. Eastern	176	244	420
2. Central	310	352	662
3. Western	233	500	633
4. Mid Western	237	409	646
5. Far ,,	147	200	347
Total	1103	1605	2708
Percentage	40.7%	59.3%	100%

The table no. 5 shows the Ratio Ed. Teacher Training's final examination result. According to it, the passed examinees had the frequencies of 1103 (40.7%), whereas the failed examinees had the frequency of 1605(59.3%)

TABLE NO - 6

NUMBERS AND PERCENTAGES OF TEACHERS PASSED IN DIFFERENT SUBJECTS(Total Teachers 2708)

<u>Subject</u>	<u>Frequency</u>	<u>Percentage</u>
60 Nepali	1880	69.42 - LOWEST.
41. Math.	2294	84.71
Education	2180	80.5
Soc. Study	2224	82.13
Health	2128	78.58
Phy. Education	2138	78.95
Rural Development	2262	83.53
Art	2279	84.16

According to the table no. 6, the highest percentage is passed in Mathematic subject which has of 2294 (84.7%). Then the other subjects Art, Rural Development, Soc. Study, Education, Phy. Education, Health & Nepali subject have the frequencies of 2279 (84.16%), 2262(83.53%), 2224(82.13%), 2180(80.5%), 1880(69.42%), 2138(78.95%), and 2128 (78.58; respectively.

TABLE NO. 7

NUMBER AND PERCENTAGE OF TEACHERS FAILED IN DIFFERENT SUBJECTS

(Total Teachers 2708)

<u>Subject</u>	<u>Frequency</u>	<u>Percentage</u>
Nepali	828	30.58% <i>M</i>
Math.	414	15.29% - <i>LD</i>
Education	528	19.5%
Soc. Study	484	17.87%
Health	580	21.42%
Phy. Education	570	21.05%
Rural Development	446	16.47%
Art	429	15.84%

Table no. 7 reveals that the highest percentage failed in Nepali Subject which has the frequency of 828(30.58%). Then the other subject Health, Phy. Education, Education, Soc. Study, Rural Development, Art & Math had the frequencies of 580 (21.42%), 570(21.05%), 528(19.5%), 484(17.87%), 446(16.47%), 429(15.84%) & 414 (15.29%) respectively.

TABLE NO.8

NUMBER OF UNSUCCESSFUL TEACHERS ✓

<u>Failure</u>	<u>Frequency</u>	<u>Percentage</u> <i>Total of failures</i>
One Subject	566 <i>566</i>	35.26%
Two Subjects	328 <i>328</i>	20.44% <i>55.70 %</i>
Three Subjects	199 <i>1093</i>	12.40% <i>68.10 %</i>
More than Three Subjects	512 <i>1605</i>	31.90% <i>100.00 %</i>
Total	1605	100.00%

Out of the total frequency 1605 (100%) those who failed in one subject has the higher frequency of 566 (35.26%) followed by more than three subjects failure which have the frequency of 512(31.9%). Then those who failed in two subjects & three subjects have the frequency of 328(20.44%) and 199 (12.4%) respectively.

48

Finding

The enrollement of teachers at the Radio Education Teacher Training were 2778 in numbers in 1982 from various districts of Nepal.

Out of the total enrolled teachers, the numbers of male teachers were 2635 (94.9%) and the numbers of female teachers were 143(5.1%).

In the final examination (1982), 70 (2.5%) teachers were found out to be dropouts.

Out of the total numbers of examinees of 2708 (100%), 1103 (40.7%) teachers passed and 1605 (59.3%) teachers failed.

The highest percentage (84.71%) of teachers passed in Mathematic subject. The other Three leading subjects were Art, Rural Development & Social Study having their percentage 84.16%, 83.53% and 82.13% respectively.

30.58% of teachers failed in Nepali subject. Then other leading subject in which the teachers failed were Health, Physical Education & Education which had 21.42%, 21.05% & 19.5% respectively.

In the final examination, out of 1605 failed teachers, those who failed in one subject, two subjects three subject and more then three subjects were 566 (35.3%), 328 (20.5%), 199 (2.4%) and 512 (31.9%) respectively.

CHAPTER III

Summary & Conclusion

In the final examination of the Radio Teacher Training in 1983, 1103 (40.7%) teachers passed & 1605 (59.3%) teachers failed. But if we analyse subjectwise pass numbers, more than 75% teachers passed in all subjects except in Nepali subject in which 69.4% only passed.

In conclusion, those findings reveal the actual achievements & performances of teachers trained through radio and supporting materials.