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NEPAL RADIO EDUCATION TEACHER TRAINING PROJECT

END OF TOUR REPORT

FOR

KATHLEEN KRUMHUS

For the period of May 5, 1979 through December 2, 1981

Prepared by
Kathleen Krumhus
December 1981

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Kathleen Krumhus

INTRODUCTION

I was hired in April 1979 to advise staff members of the Radio Education Teacher Training Project (RETT) in the development of a self-instructional teacher training text. This text would accompany 150 hours of radio broadcasts which would be used to train primary school teachers in the remote areas of Nepal. Concurrent with my arrival in Nepal, I began working on three projects:

1. Designing a workshop to train RETT staff in the specification and writing of self-instructional materials.
2. Developing an assessment instrument to measure the skills of primary teachers in Nepali language and math.
3. Studying Nepali language and producing samples of self-instructional materials to field test with rural teachers. A description of each of these projects is given below:

METHOD

1. Self-Instructional Material Writing Workshop

The workshop was begun in July, 1979 and continued until September 21. Ten Project staff and 4 guests from the Ministry of Education and Culture, the Curriculum Development Center and Janak Educational Material Center participated. A description of workshop objectives and an agenda is inclosed in Appendices A and B.

2. Nepali Language and Math Assessment Instrument

The purpose of this assessment tool was to give RETT production staff an indication of the level at which RETT materials should be produced. Since no standardized achievement tests or pool of commonly understood words was available, I began working with staff to develop a test to measure Math and Nepali language, listening, reading, and writing skills. This assessment instrument was keyed into the Primary School Textbooks and divided into 10 levels which were comparable to the difficulty of skills required at each grade level in Math and Nepali language textbooks. Eight RETT staff members were involved in the development and administration of this instrument. The test was administered to untrained primary school teachers in all four of Nepal's Development Regions.

Following the arrival of the evaluation advisor, this project was turned over to him. He continued working with the test and also used it as a training device with the research team.

3. Nepali Language Study and the Formulation of Ongoing Field Evaluation.

It was apparent early in the project that the success of the RETT project would be contingent upon extensive contact with rural primary school teachers during the design and writing of our instructional materials. Since rural teachers did not speak English, this meant that interaction with the RETT target population would require a functional level of proficiency in Nepali language. I began studying Nepali immediately upon arrival and continued studying two

hours per day with a private tutor for 18 months.

Simultaneously, I began working with RETT staff developing sample materials to field test with rural teachers. During this phase sample materials from the three core subject areas - Education, Math, and Nepali language were prepared. These were evaluated with teachers in all four Development Regions of Nepal. Teachers involved in this work also represented both hill and plain areas of the Kingdom.

At this time, I also began developing, with RETT staff members, a self-instructional manual to teach RETT primary teachers how to put together and operate their solar collector panel, rechargeable battery, external antenna, and UNICEF radio. Since many of our teachers had never operated a radio, this was quite a challenge. Once again teachers from all four Development Regions, as well as hill and plains areas participated in this evaluation. This field testing was also used as an opportunity to begin developing the style of illustrations which would be used in subsequent materials.

During this phase I also had an opportunity to visit many rural primary schools and to talk with teachers about their teaching problems and about the kinds of things they would like to learn about in their teacher training program. I also had an opportunity to analyze the teaching methodology currently being used in the rural schools and to observe the range of proficiency with which the teachers implemented the children's primary school curriculum.

RESULTS

The results of work in these three areas combined with work going on in other parts of the project suggested major revisions in the instructional system used in RETT and

consequently a major shift in my responsibilities. The following is summary of the results of these projects.

1. The results of the assessment instrument combined with data obtained from field testing sample materials indicated that teachers read very slowly. Learning any new concepts via a written medium was a frustrating, tedious process. We were never able to stop them from "cheating" when using self-instructional materials. Studying materials to pass a test is heavily ingrained in the Nepali educational system. Self-instructional learning systems were perceived as a kind of extended testing situation and we were never able to break this pattern. Thus, we decided to abandon the notion of an independent set of self-instructional materials and to use the printed materials as a kind of scripted lesson plan to help mediate the gap between the time the teachers listen to the RETT radio broadcast and the time they might actually implement suggested methodology in their classrooms. This was also consistent with results from field testing which suggested that teachers learn very little from RETT radio broadcasts which did not have written materials to accompany them. If they tried to take notes during the broadcast, they missed many important points. The writing skills of the teachers involved in the project are even weaker than their reading skills. Samples of the final format which we developed are included in Appendix C, Section 3 and 4.

2. The results of the assessment instrument suggested that the teachers understood simple spoken Nepali, even though Nepali language was often their second language. However, their reading and writing skills lagged far behind. The secondary school textbooks seemed to be a reasonably good source of vocabulary words which writers could use in their

instructional materials. Teachers seemed to have fairly good command of the vocabulary used in these textbook, but the writing would have to be non-technical and the sentences short and simple. Samples of materials developed by the RETT staff are included in Appendix C, Section 4.

3. It was clear from field testing that it would be very difficult for the teachers to successfully compile the complicated solar system, with external antenna, and rechargeable battery storage system called for in the project paper. Teachers were very confused and frustrated by the operation of the radio alone, when the solar system was added, it became impossible. It also became apparent that a short demonstration greatly facilitated this procedure. Thus, the self-instructional manual was modified to a demonstration checklist which would be done by primary school supervisors. A system was set up to train them in the proper use of the radio. The remainder of the solar system was dropped in favor of drycell batteries, which also proved to be cheaper than the solar system. The external antenna was also discarded.

4. It was also readily apparent from observing teachers in the field and talking with them that the RETT training program should focus on teaching teachers the practical basic skills needed to implement the primary school curriculum. Unfortunately the curriculum which had been developed for the training program was far more theoretical than practical. It was also too ambitious for the 10 month training period which would be available to RETT. The curriculum would have to be completely rewritten. I began working with RETT project staff to rewrite the curriculum. This proved to be a long complex process and took more than a year to complete. A detailed description of the content of the final curriculum and the procedure which was used to develop it can be found in Appendix C.

5. Although staff members evaluated the pre-service workshop very highly, the skills obtained in the pre-service training were not adequate to meet the project production needs. The skills of RETT staff members were not strong. They would need a great deal more training, monitoring, and support than had been originally anticipated. Also the number of staff members working on the project was in a continual state of flux. The total number of staff members involved in the production of RETT lessons varied between five and 28. Only three staff members who had been involved in the pre-service training remained with RETT for the total duration of the project. A great deal of time was necessary for staff training and monitoring. The analysis of RETT training needs and the training procedure I developed to meet these objectives are included in Appendix D.

6. After working with RETT staff members to produce sample materials for field testing, it became apparent that a system would have to be developed to ensure that script-writers, self-instructional material writers, illustrators, producers, and editors functioned as a team in the production of RETT lessons. The various components of a lesson were written independently with little consultation between team members. The feedback-training system which I developed to help combat this problem is described in Appendix D.

7. An additional problem which was revealed during the field testing of sample materials was the limited experience RETT writers had had with rural primary school teachers. Only one of our staff members had ever taught in a rural primary school. Most staff member were unfamiliar with the problems facing the teachers involved in our program. Writer's expectations were generally unrealistic and teachers usually were unable to implement their ideas.

A system of ongoing formative evaluation had to be developed, to provide practical feedback to writers. The feedback-training method which I organized helped deal with this problem. The feedback-training procedure is described in Appendix D.

SUMMARY

Thus, my responsibilities changed during the evolution of the project. Instead of working just with the self-instructional materials writers and with that portion of the project, my time was spent in far more general aspects of the program. My major responsibilities were the development of a practical integrated primary school curriculum and the coordination of the production of the RETT instructional package. Not only did I help self-instructional material writers with development of their 950 pages of materials, but I also attempted to coordinate the activities of the producers, scriptwriters, illustrators, and editors as well. My efforts to integrate the various aspects of the RETT instructional unit resulted in the development of the feedback-training system.

RECOMMENDATIONS

A number of RETT staff members have developed good skills in the preparation and production of a radio education program. I would recommend that these strong staff members be allowed to continue to work together in the design and development of additional training programs using this instructional media. I would specifically suggest that these writers move quickly into working on materials to teach children basic skills over the radio. Nepal could greatly benefit from this type of instructional system and it would be a

perfect complement to the radio based teacher training programs

The writers who continue working with the RETT project will need continued support and assistance from teacher educators who are experienced in the design and writing of practical, simple curriculum materials and teaching lessons. If such persons are available in Nepal, they should be called upon to assist core RETT staff in the development of new radio based teaching projects.

APPENDIX A

Self-Instructional Materials Development Seminar

Instructor: Kathleen M. Krumhus, Ph.D

Duration : 6 weeks

Support Materials: The Preparation of Self-Instructional Programmes

(INNOTECH), Published by SEAMEO, Bangkok, Thailand, 1974.

Preparing Instructional Objectives, Robert F. Mager, 1962, Fearon Publishers, Inc., Palo Alto, California.

Writing Worthwhile Objectives, Julia Vargas

Principles of Direct Instruction, Carnine

Principles of Programmed Instruction, Holland, et al

41 Germinal Papers, Personalized Systems of Instruction, Ed: Sherman

Assorted Papers

Terminal Objectives:

Following completion of this training programme members of the writing committee will:

1. Have written samples of linear, branching, direct instruction and Personalized Systems of Instructional materials, and evaluated them based on learner performance.
2. Have successfully differentiated between examples of good and poor units in each of the above programming style.
3. Have developed and administered pre and post tests for each of the programming styles mentioned above. (Including at least one example of criterion referenced tests.)
4. Have re-written self instructional materials based on data obtained from administering posttests and within programme student performance.
5. Have successfully incorporated prompts, fading, teaching and testing frames into the material they've developed. (as defined by learned performance.)

APPENDIX B

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	WEEKS
Introduction to workshop Pretest	Task analysis	WRITING BEHAVIORAL OBJECTIVES		Sequencing educational materials	Developing Pretest	1
Criterion referenced post-tests	OVERVIEW OF PROGRAMMING FORMATS		LINEAR PROGRAMMING			2
LINEAR PROGRAMMING				BRANCHING PROGRAMS		3
BRANCHING PROGRAMS		DIRECT INSTRUCTION PROGRAMMING				4
Direct Instructing Programming	PERSONALIZED SYSTEMS OF INSTRUCTION		Review of programming	FREE USE OF INSTRUCTIONS TO TEACH		5
DEVELOPMENT I	TESTING,	AND REVISION	OF PROGRAMMED	SEQUENCE		6