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# The Problem of Education Materials in a Developing Country

## THE NEPAL APPROACH

The Problem of Education Materials  
in a Developing Country

THE NEPAL APPROACH

by

Luanna J. Bowles

Education Materials Advisor

US AID Mission to Nepal

Kathmandu, Nepal

April 8, 1964





The manuscript for the new Nepali Reader is here being presented to the Education Materials Commission.

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# The Problem of Education Materials in a Developing Country

## THE NEPAL APPROACH

### I. Prologue

**I**N 1959, when Nepal first began to give serious attention to supplying its school population and its illiterate adults with adequate education materials, less than five percent of all primary-age children were in school. The adult illiteracy rate was between 95 and 98 percent.

In addition to the problem of providing modern education materials, a new education structure had to be created, with emphasis on the primary and secondary levels. New courses of study and curriculums had to be prepared from scratch, administrators and teachers had to be trained in the newly established College of Education, in the chain of struggling normal schools, and through a series of workshops.

To undergird all these endeavors and to enable Nepal to achieve its aim—the education of its people—a new working philosophy of education materials had to be formulated, hewed out, expounded, and implemented. The problem in Nepal differed more in degree than in kind from that in most of the geographic areas which have come to be known popularly as “newly developing countries”. In Nepal the work had to be started at the lowest round and move in the only direction it could go—up.

Historically, Nepal's situation was unique. She had escaped the colonial era altogether, and had never been ruled by a foreign power. Her period of subjugation began over one hundred years ago when the local Rana family united Nepal and ruled it, cloistered the Royal Family, made their own office of Prime Minister hereditary, and stifled all contact with the world beyond the snow-blown Himalayas to the north and the tropical jungles to the south.

A few schools were maintained. Beginning in 1915, a limited number of carefully selected young men were allowed to study in India. A few Nepali aspired to write education materials, but they and their books were carefully scrutinized by the ruling Ranas to ensure that no authors held dangerous political ideas or incorporated anti-Rana sentiments in their writings. Ancient classical Sanskrit legends and religious poetry were edited to delete all monarchical leanings favorable to the cloistered King.

The change came dramatically in late 1950 when King Tribhuvan, father of the present King Mahendra, with secret backing of educated Nepali and without violent revolution, broke the strength of the Rana autocracy, restored power to the Royal Family, and opened wide his country to a strange, little-known, industrialized world. During the period since the restoration, the people of Nepal have attempted with heroic effort to move swiftly from the concepts, superstitions, and values of a pre-scientific society into an understanding of and participation in such modern international instruments as the United Nations.

With the Rana downfall, the fear of being penalized for possible disloyalty to the Rana regime had been lifted from writers, but other factors hindered the production of good learning and teaching materials. Chief among these were lack of understanding of modern principles of education, a dearth of recent textbooks from developed countries, absence of supplementary materials and education periodicals. There was no dynamic education leadership anywhere in the country. There were no general or resource libraries. There were no publishing houses or well equipped printing presses, and no skilled staff who could administer and operate such social institutions. The total government structure was as underdeveloped as was the country. Without a sound tax system the government lacked money for establishing and administering a modern education program.

The United States had established diplomatic relations with Nepal in 1947. Mr. Loy Henderson, U.S. Ambassador to India, accompanied by an Embassy delegation, came over the mountains and into the Valley, on horseback and on foot, to present ambassadorial credentials to the Rana Prime Minister in Kathmandu. Late in January 1951, representatives of the new Nepali Government met delegates of the U.S. Government in Delhi to begin discussion of a cooperative program for development of the country. By 1954 the first work on preparation of education materials for illiterate adults was in process.

Concern for good education materials adequate both as to quality and quantity had been expressed in general statements, but the first tangible planning of ways and means for supplying them was incorporated in the 1959 Project Agreement, signed jointly by His Majesty's Government and the U.S. Mission to

Nepal. With this document the legal basis for constructive action was established, and provision was made for the first American Education Materials Advisor to join the Education Division staff. Late in the year, I came to Nepal on direct transfer from Iran to fill this new position. A year later Mr. C. Wesley Brewster joined the staff as Education Materials Advisor in charge of the work connected with processing the new materials manuscripts and distributing the books throughout the country.

### The Working Philosophy

In attempting to provide newly developing countries about the world with education materials, American advisors and local educators have devised widely differing types of programs. One method being used is to have manuscripts written in the States by participants and the books printed in the States. Another is to translate or adapt American textbooks. A third is to have manuscripts prepared at a Regional Materials Center, where the writing is done by educators from their respective countries, guided and assisted by American technicians. A fourth method sometimes used is to have short-term American technicians assume major responsibility for the writing of manuscripts in a developing country.

None of these patterns met the need in Nepal. The urgency was not only for a supply of good books for schools. It embraced also the need for establishing in Nepal a permanent governmental structure for producing education materials, accepted by Nepali and manned by Nepali. It included the long-term, day-by-day training on the job of the best-equipped Nepali, potentially capable of filling many of the existing gaps in qualified education leadership. It meant that Nepal must have at hand a quantity of resource text materials for daily use of writers; that participants must be trained in the States in sound education principles and methods, in curriculum building and use, in actual writing techniques, and in utilization of completed materials.

It meant supplying equipment for every activity connected with printing and distribution of materials, and training abroad of personnel to carry on these various processes.

In fact, it meant that the Ministry of Education must understand and accept the principles of modern education and assume responsibility for establishing and administering effectively an organization which could supply education materials to meet the needs of a totally new type of social order. In short, a supply of textbooks was only part of the need. The larger need included establishing a govern-

mental institution and a long-term education training activity which were essential to development of every aspect and level of education and would influence every child attending school and every illiterate adult enrolled in a class. This was the joint task to which the Education Division and the Nepal Ministry of Education dedicated themselves some five years ago.

## II. Creating the Materials Organization

The working philosophy, which became a standard and a guide for every aspect of the new education materials program, is based on the concept that the main responsibility for planning and developing each step must be borne by the Nepali Government and educators, with full and devoted cooperation of American education advisors. It is a Nepali burden---not American---to find out how good materials can be provided to schools, and then to see that the work is done as well as possible under the circumstances of the moment. This philosophy was founded on the since justified assumption that :

1. There is sufficient potential skill among Nepali educators to perform all aspects of the work involved in planning, administering, writing, illustrating, printing, and distributing modern education materials of all sorts.
2. Nepal has the concern, drive, and stamina to use resources at her command with the efficiency and consistency required to accomplish the task before her.

Only if Nepali carried the responsibility and actually performed the work within their own environment, could they develop an understanding of sound education, learn the characteristics of good education materials, and build the strength to handle the program alone without loss of quality when the time comes for the American advisors to leave Nepal. This is not a stop-gap effort. It involves building permanently, both to meet the needs of the rapidly changing present and the more stabilized but no less dynamic future.

Bearing in mind the potential resources---material and human, the aspirations of the country, and the temper of the people, plans for the following Education Materials Organization evolved and were approved by the Minister of Education on October 26, 1960.

The Organization was established as a high-level government entity, directly responsible to the Minister of Education. The general administration is the responsibility of the Secretary of Education, assisted by the Director of Public Instruction. The Organization is composed of three units :

1. The Education Materials Commission, which is a policy-making body, entirely responsible for development of syllabuses and curriculums, and for supplying education materials to the schools.
2. The Writers Division, which plans and prepares curriculums as well as manuscripts and scripts for textbooks, teachers guides, education periodicals, pamphlets, film-strips and slide sets, charts, posters, exhibits,

radio programs, and other kinds of supplementary aids, in harmony with curricular needs and as approved by the Commission.

3. The Production and Distribution Division, which is responsible for the graphic, photographic, sound recording, and printing work required in processing the manuscripts prepared by the Writers Division and approved by the Commission for use in schools. This Division is also responsible for final and prompt distribution of the completed materials to Zonal Education Offices and to schools throughout Nepal, at no cost to the pupils.

A small, poorly-housed education press had been set up in 1959 under the Education Project, and was in operation. Much of its output was of commercial nature for other government agencies, and unrelated to the needs of education. But if the Education Materials Organization as envisaged in 1960 was to materialize, plans for a totally new plant must be drawn up.

Within two months after the Education Materials Organization was established, a change in government was brought about. The King dismissed both the Parliament and the Prime Minister and established an absolute monarchy with all branches of government more completely responsible to him. Except for a shifting of personnel, this change made little difference to the progress of the education work. All Project Agreements with the United States Government were honored without alteration.

Within a few weeks, the new Minister of Education appointed Mr. Netra Bahadur Thapa as Head of the Writers Division of the Materials Organization. Mr. Thapa had been a teacher of geography, back in the Rana days. Later he had cooperated as Project Director with the American education staff under the Education Project Agreement. Under a participant grant he spent a year studying education administration in the United States, with a month each in Japan and the Philippines.

Another returned participant, Mr. Ram Sunder Shrestha, was drawn from the staff of the newly-formed College of Education and appointed Head of the Production and Distribution Division. In cooperation with Mr. Brewster, he was able to organize the nucleus of the Division before he returned to the College staff. Mr. Yadunandan Khatri Chhetri—in Nepali usage “K.C.”—left the Writers Division to take his place. Mr. K. C. had spent a year, under a participant grant, studying principles and methods of modern education and preparation and use of education materials at Teachers College, Columbia University.

When the Materials Organization first began to function it was housed in the

most unpropitious of quarters. Three small, dark rooms, a closed-in porch whose only virtue was its sunshine on cold mornings, and a long hall-way were all that could be had in the building used by the College of Education. So far, the Organization was merely a collection of individuals attempting to discover what they were supposed to do, understanding neither the potential functioning of the new Organization nor the role each one was responsible for playing in its development. There were many qualms and doubts. Textbooks had never before been written this way in Nepal. Educators, so it was said, could not be induced to join the Writers Division where their business as government employees would be to write. They would write only at home, at night, and for additional pay. All kinds of personal interests were in conflict with the ultimate goals.

Just at this time a most fortunate development was brought about by Mr. N. B. Thapa. He knew of an unoccupied wing in a sturdy old Rana palace, called Babar Mahal, which, for the time being, could house the new Materials Organization. In it a temporarily adequate Education Materials Center could be developed. There was space for the Writers Division, and all the work of the Production and Distribution Division except printing, which would remain in the quarters of the Education Press. The only problem was to secure use of the building. Under due process of Nepali law, a request was sent to the proper office. The required advertisements were published in the local press. A board was appointed to make the decision. The board, composed of lowly members representing the required offices, sent back the verdict that because of some obscure technicality a second advertisement would have to be published.

Meanwhile, a commercial company from Delhi was also eyeing Babar Mahal. It seemed certain that they would out-bid the Ministry of Education, and our vision of an immediate Center would vanish. We asked Mr. Thapa what, according to Nepali strategy, he planned to do next. "Move in," he replied, "and then get the Cabinet to approve the move!"

This technique proved effective in the awkward framework of the underdeveloped government, and within a week both Divisions were settling down to work out their new programs in the ball-room and the living and sleeping quarters that once reflected the glories of the Rana regime. A month later Cabinet approval of the move was safely on file in the Writers Division.



### III. Appointment and Training of Personnel

One gratifying aspect of the Education Materials work in Nepal is that, since we had to begin at the bottom, all aspects could be developed simultaneously.

As soon as the Organization had been established, plans were laid for training personnel through the USAID participant program. The first group went to the States for specific training in the fall of 1960.

This is a continuing part of the program. As each group returns to Nepal from America, the members are placed in their respective positions, either in the Writers Division or in the Production and Distribution Division. About this same time each year a new group is in process of recruitment to go to the States for special training. The Project Implementation Order for each individual contains the statement that before he returns, the Ministry of Education will establish his permanent position, which has already been provided for in the budget, and will place him in it at once after he returns. The participant also agrees to accept the position as established. All major positions in both the Writers Division and the Production and Distribution Division are now filled by persons who have had training in the States, except three who were trained in India or England. On pages 10 and 11 is a listing of positions, personnel, and their training institutions. Programs are for one year, unless otherwise specified.

In addition to the participants already trained, it is planned that four additional persons will be sent to the United States each year through 1968. Two will go for training in education writing and two for specialized work in the Production and Distribution Division.

## Writers Division

<i>Position</i>	<i>Name</i>	<i>Training Institution</i>
Division Head	Netra Bahadur Thapa	University of Nebraska, observation, and conferences
Secondary Education Writer (Vocational)	Baikuntha Lal Shrestha	Oklahoma State University
Secondary Education Writer	Mohan Deva Bhattarai	Peabody College, Tennessee
Adult Education Writer	Nir Mardan Basnyat	Syracuse University, New York
Primary Education Writer	Mahendra Bahadur Thapa	University of Oregon
Primary Education Writer (temporary)	Nilkantha Rao Padhya	Kent State University, Ohio
Primary Education Writer (temporary)	Kedar Nath Shrestha	Sacramento State College, California
English Language Textbook Writer	Gaja Sunder Pradhan	London University, England
Home Science Materials Writer (temporary)	Durga Devi Sharma	Plattsburg State Teachers College, New York
Science and Mathematics Writer	Bishwa Ram Mathema	Teachers College, Columbia University, New York
Vocational Agricultural Education Writer (temporary)	Subarna Man Joshi	Washington State University and University of Wisconsin
Industrial Arts Writer (temporary)	Shankar Lal Rajbanshi	University of Oregon
Radio Script Writer	Narayan Bahadur Rajbhandari	Syracuse University, New York

## Production and Distribution Division

<i>Position</i>	<i>Name</i>	<i>Training Institution</i>
Division Head	Yadunandan Khatri Chhetri	Teachers College, Columbia University, New York
Head, Printing and Duplicating Unit	Hikmat Bahadur Malla	South Dakota State Teachers College
Bindery Supervisor	Surya Mohan Adhikari	Los Angeles Trade and Technical College, California
Head, Graphic Arts Unit	Jayadish Rajbhandari	Indiana University
* Head, Photography Unit	Bakhat Bahadur Chitrakar	Polytechnic Institute, Bangalore, India
+ Chief Artist	Keshava Duwari	School of Art, Bombay, India
Audio-Visual Services Specialist	Ratna Bahadur Kapali	Indiana University
‡ Supervisor, Photo-Mechanical Reproduction Department	Hari Bir Dangol	Rochester Institute of Technology, New York; Sam Houston State Teachers College, Texas
Head, Technical Equipment Maintenance Unit	Maheswar Padhya	RCA Institutes, New York
Equipment Maintenance Specialist	Govinda Bahadur Shrestha	Practical work in several American centers
Property Management Officer	Shyam Sunder Guvaju	Ohio State University

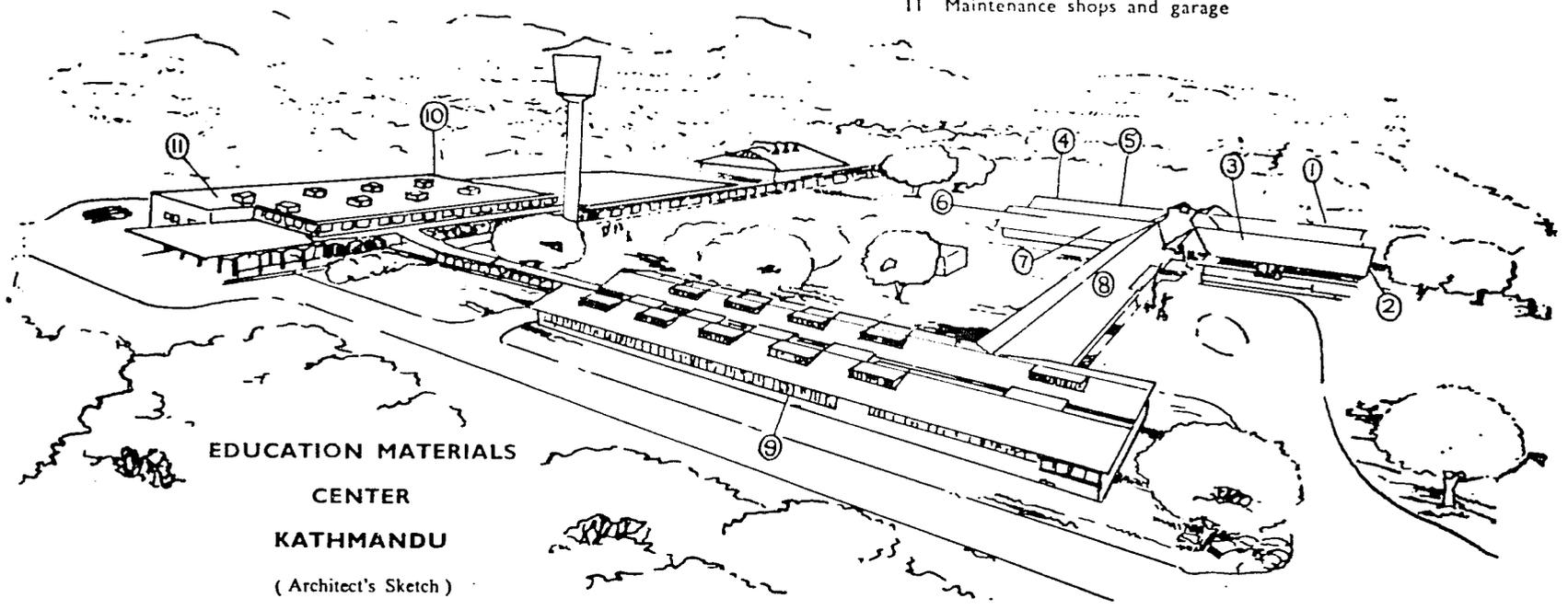
\* Four-year program

+ Five-year program

‡ Three-year program

- 1 Writers Division
- 2 Writers Division reference library
- 3 Graphic Arts studios and workrooms
- 4 Sound Recording studio
- 5 Audio-Visual demonstration laboratory

- 6 Photography studio and darkrooms
- 7 Technical Equipment Maintenance area
- 8 Administrative offices
- 9 Printing and binding plant
- 10—Warehouse
- 11 Maintenance shops and garage



**EDUCATION MATERIALS  
CENTER  
KATHMANDU**  
( Architect's Sketch )

## **IV. Establishing the Permanent Education Materials Center**

Late in 1959 and early in '60, as the concept of an Education Materials Organization took shape, planning began for a permanent Education Materials Center in which all aspects of the writing, processing, and distribution of all kinds of materials could be carried out. The Joint GON-USAID N Project Agreement for FY 1960-61 reiterated the need for implementing the work of the Education Materials Organization and stated that this activity would undertake the building, equipping, and staffing of a complete Education Materials Center in Kathmandu.

### **1. Selection of the Site**

Land for the site of the new Center was to be furnished by the Ministry of Education. All other Center costs, except for \$13,000 equivalent in Nepali rupees earned from commercial printing done by the small education press in its early dis-organized days, were to be paid out of the GON-USAID N Project with U.S.-owned PL 480, Section 1046(d) Indian rupees. As the days went by, every phase of the scheme moved on schedule, except land procurement, and it seemed at times that this situation would wreck the entire program. The real obstacle was Nepal's unwieldy legal procedure for obtaining control of land, together with the almost overpowering desire of the Ministry officials to utilize one of the better-built Rana palaces. A year and a half after signing the Project Agreement, the Ministry resigned itself to the fact that American money would not be made available for remodelling an old palace, and then seriously turned its attention to securing open land.

Early in March 1962, His Majesty became interested in developing a most desirable plot of paddy-land at Sano Thimi, some four miles from the heart of Kathmandu. This plot of approximately 85 acres was purchased, and on it eventually will be erected a complex of buildings for housing the Education Materials Center, a Technical Institute, a Demonstration Multipurpose Secondary School, and a common Distribution, Maintenance, and Storage Building. A bus line already runs on regular schedule between this area and Kathmandu.

### **2. Letting the Contract**

Before a month had passed, in preparation for contract negotiations with an architect, a detailed topographical survey map of the site was made, the first of its kind in Nepal, showing contours at half-meter intervals.

On July 24 of the same year, a rupee contract for the entire complex of buildings was signed with Chatterjee and Polk, an excellent Calcutta architectural

firm of wide experience. This in itself was a major accomplishment. So far as we can learn, this is the first time in Nepal that the preliminary design, final detailed design, bills of materials and quantities, and engineering construction supervision have been provided by professional architects. This procedure removed from American advisors all responsibility for planning and supervision of building design and construction, and placed it where it should be—in the hands of professional architects and engineers. Furthermore, all planning, even to such details as roadside gutters and lamp posts, was done as a unit, before ground was broken. This activity, which includes establishing the Organization, planning the Center, and constructing and equipping the buildings, is being carried out as a fully correlated project, seen in its entirety from the beginning.

On December 24, 1962, two days before the date agreed upon, the architect came to Kathmandu, bringing with him a complete set of blueprints and specifications for the entire complex of buildings at Sano Thimi.

In March 1963 a contract was signed with the National Construction Company of Nepal, a firm recently established in Kathmandu, for construction of the entire complex of buildings under supervision of Chatterjee and Polk's engineers. Two months later land was broken and construction of the Education Materials Center was begun. A telephone line has now been extended to the Center from Dilli Bazaar, a suburb of Kathmandu, and the instrument installed. The Municipality plans to widen the present narrow, hard-surfaced road to a two-lane highway, another major development in Nepal which can boast of only one road into the country from the outside world, and very few improved roads within the borders. Electric power will be provided by the modern municipal plant.

The most recent addition to the original planning for the Sano Thimi complex is just now taking shape. Under it, housing will be erected for the American team who will serve as advisors in the Materials Center and the Technical Institute, and for Nepali professional, maintenance, and service personnel. Present plans call for 28 separate units—eight for American families, twelve for local professional staff, eight for maintenance staff—plus six additional units for gatemen, grounds men, cleaners, etc. These units will be financed with PL 480 funds at an estimated dollar-equivalent cost of \$275,000. After the American advisors leave, their quarters will be made available to the Nepali professional staff.

### **3. Blueprinting the Center Buildings**

Intriguing as is the view of the Sano Thimi Development as a whole, from the standpoint of the need for textbooks the plans for the Education Materials Center are of the utmost importance. The floor plan is a modified "H" in shape. One



wing provides space for the Head of the Writers Division, the Resources Library for the writers, rooms for twelve writers, a room for typists, and rooms for graphic artists and all audio-visual work. The opposite wing houses all printing and binding work, and leads by covered passage directly into the Distribution, Maintenance, and Storage building. Administrative offices occupy the cross-bar space of the plan. The entire Materials Center structure occupies approximately 31,000 square feet of land and the common Distribution, Maintenance, and Storage structure 17,000 square feet.

Such an institution as the Education Materials Center requires much storage space for raw materials, finished output, and maintenance and repair services. There are in Nepal no central receiving, processing, storage, and distribution facilities. In fact, there is no property management organization at all. Obviously, this makes control of Project property extremely difficult, and makes the Projects prime targets for end-use auditors. Therefore, in planning the Organization and the Center Building, we expanded the plans to provide for a complete property management organization for all the GON-USAID/N Education Development Projects. This unit, along with all other units of the Organization, will be managed by trained supervisors. They will be expected to expedite distribution of all education materials, repair and maintain all equipment, except technical, precision equipment used in the Center. It will be their duty to keep the buildings and grounds in good condition, from mowing grass and tending flower beds to keeping floors and furnishings clean and in order.

#### **4. Ordering Commodities for the Center**

As mentioned earlier, planning for all aspects of the Education Materials Organization took place at the same time. At the time of signing the FY 1960 Project Agreement, there was no one on the Education Division Staff capable of preparing the highly complex commodity requisitions required for equipping and operating the Organization. Our request to USAID/W for assistance resulted in the assignment for two weeks' TDY of Mr. Douglas W. Harris, a top-notch Trade-Industrial Education Advisor from Vientiane, Laos, with a background of commercial printing experience. He did the procurement work required to tide us over that phase of planning until Mr. Brewster, the permanent advisor in this field, arrived some seven months later.

In determining commodity needs for the Center the demonstration factor was kept uppermost in mind. All procurement, therefore, has been aimed at:

- (a) Equipping the Center to perform its functions effectively in terms of the needs of Nepal.

- (b) Providing enough expendable materials to make possible an adequate demonstration of efficient manuscript preparation and processing and printing of modern education materials as judged by today's education standards.

Procurement for the Writers Division has consisted mainly of purchasing books for stocking the Education Materials Resources Library for use by manuscript writers. Ten sets of modern textbooks and supplementary materials for grades 1-9 were included in the first commodity order. These have been in daily use ever since they arrived. They are used for reference and authority on all aspects of manuscript work, from size and kinds of type and paper to course content and curriculum construction.

Commodities for the Production and Distribution Division consist mainly of:

- (a) *Equipment*, including machines, tools, and accessories required for: processing textbooks, teachers guides, and supplementary materials printed by either offset or letterpress; a wide variety of graphic arts, photographic, and sound recording work; maintenance of technical equipment; distribution of printed books and supplementary teaching and learning aids.
- (b) *Materials*, including 100 tons of paper for printing needs, photographic and art supplies, magnetic tapes and other supplies for sound recording, materials and supplies for maintenance of equipment and for distribution of books and other materials.

## 5. Handling the Funds

Delay in purchase of land had been a very serious obstacle, blocking satisfactory progress in developing the Education Materials Organization. It was also clear that handling the funds for constructing the buildings for the Materials Center and other parts of the Project complex could be equally devastating. A sound method, new to GON-USAID/N cooperative Projects, for administering the funds and architectural and construction contracts had to be devised. Otherwise, there would be endless delays which could permanently jeopardize the entire program.

The device selected to overcome this obstacle was the Trust Fund. Rupee funds released by USAID/N to the Ministry of Education would be placed immediately in a Trust Fund administered by the USAID/N Controller. The Government of Nepal enters into contracts with the architect and construction firms, with USAID/N assistance. All contracts are subject to USAID/N approval. Payments are made directly to the payee by the USAID/N Controller. The

AID 10-5A  
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ANNEX

PROJECT AGREEMENT BETWEEN AID  
AND THE MINISTRY OF FINANCE AND  
ECONOMIC AFFAIRS, AN AGENCY OF  
HIS MAJESTY'S GOVERNMENT OF NEPAL.

1. Project No.  
367-67-018

2. Agreement No.  
1960  
ANNEX C

3. Original   
Revision No. 3

Sheet 1 of 1  
Sheets

### IMPLEMENTATION PROCEDURE TO ASSIST HMG/N IN LOCAL CURRENCY-FINANCED CONSTRUCTION

1. Each job (or group of jobs) to be undertaken must be sufficiently well identified so as to be able to establish the following:
  - (a) Type of construction (i.e., hospital, school, etc.).
  - (b) The precise location where the construction is to be undertaken, including confirmation that land has been acquired and is available.
  - (c) A tentative schedule for the construction.
  - (d) A *preliminary* estimate of the cost of the construction, including Architectural and Engineering services. (This should be prepared by HMG/N).
2. When the date set forth in 1. is established, then the following steps will be undertaken:
  - (a) HMG/N, with the advice, guidance, and subject to the approval of USAID/N, will select the architect for the job.
  - (b) After an architect is selected, USAID/N will assist in the negotiation of a contract for A & E services (including site survey, construction supervision, and bills of quantities) and will approve the contract for financing. HMG/N will enter into the contract, and USAID/N will disburse funds *directly* to the architect upon presentation of vouchers, etc., required by the USAID/N Controller, including a Certificate of Performance signed by an authorized representative of HMG/N.
  - (c) The architect will prepare site surveys, plans, bills of quantities, the invitation to bid, the construction contract which, subject to approval by USAID/N, will be issued to a selected group of construction contractors who will be invited to submit bids.
  - (d) When bids are received, the architect will assist HMG/N and USAID/N in the evaluation of the bids; and a construction contractor will be selected, subject to the approval of USAID/N.
  - (e) The architect and USAID/N will assist HMG/N in negotiating and drafting a *lump sum* contract with the construction contractor, which when approved for financing by USAID/N, will be signed by an authorized representative of HMG/N. USAID/N will disburse funds directly to the construction contractor upon submission of such documentation as the Controller, USAID/N, may require, including a Certificate of Performance signed by an authorized representative of HMG/N.

For the Cooperating Agency

KUL SHEKHAR SHARMA  
*Secretary,  
Ministry of Education*

B. B. THAPA  
*Secretary, Min. of  
Econ. Affairs*

For the Director, USAID

JOHN L. ROACH  
*Director, USAID/Nepal*

Government of Nepal designated the Chief, Education Division, USAID/N, as Contract Administrator.

With approval of the Regional Legal Advisor and the AID/W Associate General Counsel, this procedure was incorporated in the Project Agreement as an Annex, a copy of which is reproduced on page 18. This system has worked smoothly for two years, and is suggested as a possible means of procedure in other countries utilizing large amounts of local currencies, and where government administrative methods, although undergoing development, are still cumbersome and unreliable.

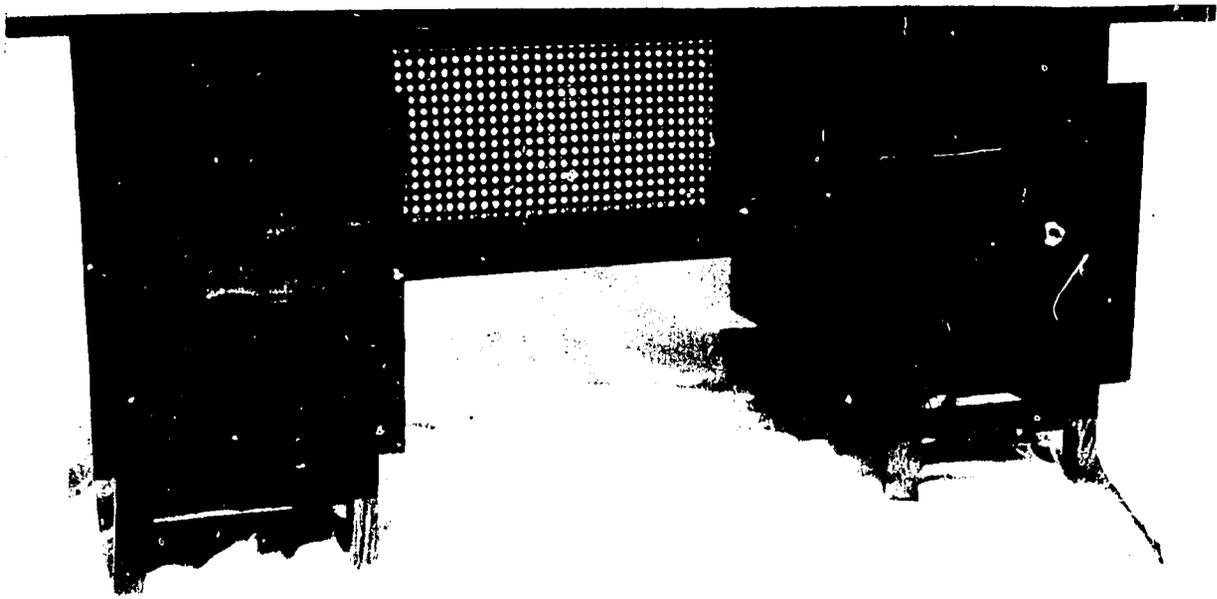
## **6. Building Progress**

As provided by the building contract, the first work performed by the National Construction Company of Nepal was erection of a temporary engineering office on the site. At the same time, a temporary storage shelter was put up to protect building materials, especially cement, which must be imported from India. Other materials brought up from India included steel reinforcing rods, plywood, insulating board, and roofing paper. The purchase request for cement and steel from India came soon after the beginning of the military conflict between India and China. Considerable time was lost before the problem of India's fulfilling its cement and steel export quotas to Nepal was resolved. Building materials obtained locally included timber, sand, crushed stone, stone blocks for use in walls and foundations, slate for roofing, and bricks. Lumber could be obtained readily, since 50 percent of Nepal's wealth of resources lies in her vast southern forests.

The next task was beginning work on the boundary fences, which will be made of ornamental brick facing the highway, and of concrete posts, barbed wire, and hedge planting on the other three sides. Work also was started on the interior system of driveways and service roads. The base of coarse rock has been laid. Eventually, all roads and drives will be hard-surfaced.

The contractor is setting up a workshop for the manufacture of all wooden door and window frames, doors, built-in furniture, and for forming reinforcing rods for concrete work. Such furnishings as chairs, desks, and tables were designed by the architect. Prototype sets have been made by the Balaju Wood-working Shop, which was established through cooperative efforts of USAID/N and the Government of Nepal, and is now being operated by GON.

Contracts for manufacture of the 10,000 pieces of furniture ultimately required by the whole Sano Thimi Complex will be given to the Balaju firm and other local furniture makers. This will go far toward stimulating the budding furniture industry of Nepal.



Offices of the Education Materials Center, at Sano Thimi, will be furnished with desks and chairs like these models, which were designed by the architect and constructed by the Balaju Wood-Working Shop.

Foundations for the Materials Center and the Distribution, Maintenance, and Storage Building were laid out in June 1963. Monsoon rains delayed the initial work, but digging for foundations began in October. In November, workmen began laying the foundation walls and pouring concrete.

Because of the growing need for storage of U.S. and local commodities now held in Babar Mahal, the Distribution, Maintenance, and Storage Building of the Center has been given priority. It should be ready for use in approximately six months. Foundations are complete, fill is in place in preparation for pouring concrete floors of both the Main Building and the Distribution Building of the Center. Forms for reinforced concrete supporting columns and arches are under construction. The builders plan to continue work straight through the coming monsoon period.

In January of 1964, a well-drilling crew tapped a strong vein of water at a depth of 912 feet. This will furnish 75 gallons a minute for the entire complex.

# EDUCATION MATERIALS ORGANIZATION

MINISTRY OF EDUCATION

SECRETARY, MINISTRY OF EDUCATION

Education Materials Commission

Chairman-Secretary, Ministry of Education  
Vice-Chairman-Director of Public Instruction

Members :

1. Head, Primary Education Division
2. Head, Secondary Education Division
3. Head, Adult Education Division
4. Principal, Normal Schools
5. Chief, Editorial Division
6. One member at Large

Writers Division

Chief :

1. Primary and Adult Education Writers
2. Secondary Education Writers
3. Assistants for above levels
4. Film strip, and supplementary education aids writers
5. Radio and sound script writers

Materials Production-Distribution Division

Director and Assistant Director :

Processing Section :

Chief:

1. Graphic Arts
2. Photography
3. Printing
4. Duplicating
5. Sound Recording for Radio, etc

Management Section :

Chief:

1. Personnel
2. Accounting
3. Property Management & Distribution
4. Buildings & Grounds
5. Public Information

Training Section:

Chief:

1. Center Staff
2. Education Consultants
3. Students in Normal Schools
4. Teachers in Service
5. Students in the College of Education

Audio-Visual Services Section :

Chief:

1. Projected Materials
2. Non-projected Materials

## V. At Work in Babar Mahal—the Temporary Materials Center

The measure of the validity of the foregoing well-planned, well-administered Nepal-American activity for putting school books into the hands of every child in Nepal rests upon what is happening today in Babar Mahal, the temporary Education Materials Center. Every day's work is significant in two ways:

1. It serves as a training-learning experience for the staffs of the Writers Division and the Production and Distribution Division.
2. It also is an essential section of the long-time productive task of writing, illustrating, printing, and distributing books and supplementary materials to school children and illiterate adults.

The quality of the work performed in Babar Mahal is a forecast of the superior quality that can be achieved later in the permanent Materials Center at Sano Thimi. The present is a preparatory period for training the staff members so that they will be ready to utilize and maintain the new Center. There they will have at their command the best equipment and supplies available in the world, and the highest quality of building design and construction possible today in the Kingdom of Nepal.

### A. Growth of the Organization

Paralleling the purchase of land for the new Materials Center and the early efforts toward getting the actual building under way, were two other equally important activities:

1. Helping the Materials Commission reach its mature stature within the Ministry of Education structure.
2. Welding the staffs of the Writers Division and the Production and Distribution Division into teams of cooperating, professionally skilled craftsmen at work in producing good education materials for Nepal.

During this period of literally feeling our way day by day, Babar Mahal was rented, the personnel, most of whom had just returned from their study in the States, were officially taken out of their former positions as teachers, and were established comfortably at their new desks in Babar Mahal to begin their pioneer work in Education Materials.

Bookcases had been built for the resource education materials recently acquired from the States, and were shaped into a library. A telephone, still a scarce amenity of life in Kathmandu, was eventually installed. Water was turned into long unused pipes for the make-shift photographic laboratory.

The Education Materials Commission was now meeting once each week—not as an out-of-work-hours, extra-curricular event as at first—but at 10:30 each Monday morning in the office of Education Secretary Shyam Krishna Bhattarai, who serves as chairman of the group. These meetings are attended by Director of Public Instruction Krishna Bhadur Marandhar.

One of the Commission's first decisions was to authorize the writers to begin manuscripts needed for Grade I, as required by a new primary curriculum, described later, and then to move on to the upper grades as rapidly as possible.

The Production and Distribution Division, as was authorized, established itself as a purely service group working only on manuscripts and requests sent to it from the Writers Division. The early efforts of this Division consisted mainly of working out the administrative procedures for handling incoming and outgoing commodities and work schedules and procedures, setting up a photographic laboratory, organizing the graphic arts and mimeographing units, improving the operation of the Education Press, developing a radio programming unit, and reconditioning radios which had been provided to the Adult Education Section a year earlier.

## B. Developing the Writers Division

As mentioned earlier, the concept of assigning educators to write textbooks met with considerable resistance in the beginning. Approval of one participant grant was withheld by the Planning Ministry with the verdict that "You can't teach writing." Later, the grant was approved after full explanation that there was no intent to produce writers of such classical literary gems as the "Ramayana", that what we planned to do was to teach educators to work as writing craftsmen. Now, the idea is understood and accepted that the Writers Division is a place where educators work as professional craftsmen in preparing manuscripts, according to good principles of education, and appropriate to the particular grade.

### I. The Staff of Writers

When the Writers Division began its work in Babar Mahal it was composed of a corps of six professional educators, all of whom had a background of teaching experience and a year of training in the United States under participant grants. During their training periods, they studied principles and methods of education as well as preparation and use of education materials.

The Head of the Division is Mr. Netra Bahadur Thapa, well recognized as a geography teacher and writer as far back as the Rana regime. His work at the University of Nebraska was in education administration, and he spent consid-

erable time attending education conferences and visiting State Education Departments. Other members of the Division staff were Mr. Pasang Goparma Sherpa, who studied elementary education and writing at Bank Street College, New York; Mr. Yadunandan Khatri Chhetri, who spent a year at Teachers College, Columbia University, in the field of general secondary education and writing; Mr. Baikuntha Lal Shrestha, with a year at Oklahoma State University, studying vocational agriculture and writing at the secondary level; Mr. Nir Mardan Basnyat, whose year at Syracuse University was devoted to principles and methods of adult education and preparation and use of adult materials; and Mr. Narayan Bahadur Rajbhandari, who had a year at Syracuse University in radio programming and script writing, and is now serving both Divisions.

Five of these men are still with the Organization. Mr. K. C. was moved later to the Production and Distribution Division as Head, and Mr. Sherpa left the Ministry of Education for a better paying position in the Panchayat Ministry. To fill Mr. Sherpa's place, Mr. Mahendra Bahadur Thapa, who studied education for a year at the University of Oregon, was transferred from the College of Education to the Division. Later, after Mr. Mohan Deva Bhattarai completed his year at George Peabody College in secondary education, he filled the position vacated by Mr. K. C. Mr. Bishwa Ram Mathema, who is technically a member of the staff, will soon complete a year at Teachers College, Columbia University, in the field of science and mathematics education. He will have charge of secondary writing in these education areas. As the writing load increases these writers are being assisted by other Ministry members, or by teachers who join the writing staff temporarily, as described later.

## 2. Preparing a Primary Curriculum

The root of the entire writing activity is the curriculum of the primary and secondary schools--what the teachers and children do each day in the brick school houses of the Kathmandu Valley and what they also do in classes meeting under the trees on a mountain side. Unless the curriculum deals with the new aims and values which Nepal is attempting to make her own, there can be no flowering of education materials comparable in any way with what we in America consider essential in preparing children to live creatively in our nuclear era. By opening her mountain passes to the world, Nepal has also elected to live in this modern, scientific age, and her curriculum and school books must provide the generative power.

Just at the time that the FY 1959 Project Agreement was being signed, which was the first one requiring that an organization be set up to provide a new type of

textbook, the Director of Public Instruction, Mr. Sharada Prasad Upadhyaya, who had spent six months under an observation-study grant in the United States, Hawaii, and the Philippines, was at work on a new type of curriculum for Grades 1-5. The aim of the new education, he stated, “. . . is to create useful citizens who are fit for the developing age and democratic society. In order to become useful citizens of society, children should make physical, moral, and intellectual development altogether. And so science, the arts, and physical education have been included. . . . In view of the undeveloped economic life of our country, it is necessary to place proper emphasis on the self-supporting type of education. . . .

“Primary education will be five years’ duration in the new system. The following subjects will be taught in the primary schools: language, social studies, science and health, mathematics, fine arts, self-help or crafts, and physical training. . . . This curriculum has been prepared so that education will be practical in this scientific age.”

With this sound legal basis for improving and expanding the early life in the school, all the efforts made toward writing a new type of education materials could be correlated and given a common focal point.

### 3. A New Kind of Reader

Even while the Education Materials Organization was still in a nebulous pattern, and before the Commission began functioning, the Director of Public Instruction gave his approval for us to begin writing a new kind of Nepali Reader for Grade 1. Mrs. Chandra Kiran, who was on the staff of the College of Education and who had studied education for a year at the University of Oregon under a participant grant, was appointed to do the actual writing of the Reader and a teachers guide. The first efforts were through discussions participated in by both Nepali and Americans. The pattern later established for writers was used, that of first defining the following basic education principles to be considered in writing:

- (a) How do children learn?
- (b) What methods have proved best in helping them learn to read?
- (c) What content will best reflect the daily life of the children?

As Mrs. Kiran wrote, she tried out her stories on neighborhood children, including her own son, and waited for their reaction. Sometimes it came in the negative: “But, Mother, I wouldn’t say it that way,” and the story was done over. One story was discarded because it seemed to condone the caste system, illegal “now that we have democracy.”

The Commission sub-committee appointed to review this First Grade Nepali Reader questioned many of the new methods employed. Numerous periods of dis-



The new Nepali First Reader was prepared in Mrs. Kiran's living room. She and I here review modern methods of teaching reading as they apply to Nepali.

cussion took place. Finally, with some few changes in details but not in method, the manuscript and its teachers guide, prepared in the Writers Division, were presented to the Commission and approved for printing. In a few weeks they will emerge from a Calcutta press, and will be sent out to the schools. The preparation and approval of this Reader represent an essential period of learning experience by Commission members regarding the best way they can perform their important responsibilities.

#### 4. "The National Aims of Education"

The first official task undertaken by the Materials Commission was compilation of the "National Aims of Modern Education in Nepal." A sub-committee of writers was appointed to do the work before the Writers Division was staffed. The early meetings were devoted to a discussion of present-day Nepali society, recent changes, and the directions in which it is moving in short, the role of education in a developing country.

I furnished all resource materials available, dealing with the work of the Educational Policies Commission of the National Education Association of the United States. The sub-committee was particularly interested in their work on spiritual and moral values in society which determine the character of a nation's education. When the "Aims" were drawn up they were grouped under four headings:

- (a) Development of the Individual
- (b) Development of Civic Competencies
- (c) Development of Economic Competencies
- (d) Development of Human Relationships

These "Aims" were approved by the Commission as a basis for preparation of materials. However, before they were published, except in mimeographed form, an enterprising, personally ambitious official who lacks training in modern education, re-raised the issue on the ground that the present form was not worthy of Nepali educators in that the "Aims" were too simply stated and lacked the proper classical philosophical expression. After months of discussion, which produced more heat than light, the "Aims" were again approved in their original form, except that all Sanskrit language was replaced by current Nepali usage.

Shortly, the "Aims" will be published as posters, to find their way to the walls of all schools. A teachers guide, explaining their use in connection with the curriculum, has been prepared. They form an important chapter in the draft of a manuscript titled, "A History of Education in Nepal," which will eventually be published.

##### **5. Courses of Study--Grades 6-8**

Near the end of the first year, the Commission requested the Writers Division to organize committees of the permanent writers and best qualified local teachers to prepare courses of study for grades 6-8. None had ever been prepared before, but they were essential if textbooks were to be written. Throughout the following year, these committees utilized recent workshop reports, foreign textbooks from the Resources Library, and all available help from advisors in taking these pioneering steps toward a full-fledged lower-secondary curriculum. The committees worked almost daily around the big library table. After detailed review by Commission sub-committees, all courses of study were approved by the Commission, and a request went to the Writers Division to prepare text manuscripts.

## 6. Use of Temporary Writers

It is evident that the small corps of permanent Writers can not prepare all the manuscripts needed. It is possible, however, to secure assistance from the best qualified teachers and educators for writing text manuscripts, just as had been done in preparing the Courses of Study for Grades 6-8. The Commission worked out a plan, and regularized it according to Ministry of Education directives, whereby teachers could be utilized as temporary Writers. These teachers work in the Writers Division under Ministry assignment. No additional remuneration is involved if they are government-employed teachers, unless their salaries are lower than those of comparable Writers. They work in cooperation with the permanent, trained Writers, giving the same attention to principles of modern education, and having the same access to the modern textbook Resources Library. Completed manuscripts of both permanent and temporary Writers in the Division go to the Commission for approval before being sent to the Production and Distribution Division for illustration, printing, and distribution.

The above plan seems admirably suited to Nepal with its extremely limited supply of educators, well trained in modern education. Under it, the skills and services of Mr. Nilkantha Rao Padhya, of the Ministry's Primary Education Section, have been utilized in preparing a supplementary curriculum for the primary grades. This manuscript is an expansion of the brief curriculum prepared in 1959 by Mr. Upadhya.

Mr. Padhya is now working on a teachers guide for using the expanded curriculum. He is devoting full time to it, in the Writers Division. Earlier, in the capacity of editor and Writer, Mr. Padhya utilized reports from several workshops, many modern arithmetic texts, and the assistance of the Primary Education Advisor, Mr. James A. Colman, in preparing a promising First Grade Arithmetic textbook, with teachers guide. The new Arithmetic for Grade 2 is now being prepared by another temporary Writer, Mr. Kedar Nath Shrestha, also of the Ministry's Primary Section. As listed earlier, both Mr. Padhya and Mr. Shrestha studied Primary Education for a year in the States at Kent State University, Ohio, and Sacramento State College, California.

More recently, arrangements were made for members of the Multi-purpose Secondary School Unit to join the Writers Division on a temporary, full-time basis. They are working in Babar Mahal, preparing education materials in home science, vocational agriculture, and trades and industry.

Two young women who assisted in a recent Multi-purpose School workshop are continuing their work in home science as temporary members of the Writers Division. They are Miss Shanti Joshi, holder of a B.Sc. degree from Nagpur

University, in India, and Miss Shantu Rana, who holds a diploma from the Home Economics Institute of Bombay. They are working now on home science lesson plans and subject-matter material for use in the Multi-purpose Schools, assisted by Miss Virginia Ward, American Home Science Advisor, and Mrs. Durga Devi Sharma, Home Science Specialist of the Ministry of Education.

Mr. Subarna Man Joshi and Mr. Shankar Lal Rajbanshi are working temporarily in the Writers Division in vocational agriculture and trades and industry, respectively. Each studied a year in the States under participant grants at Washington State University and the University of Oregon. With assistance from Mr. Charles A. Cazaly, American Advisor in Vocational Education, they have completed manuscripts for the Multi-purpose School program as follows:

- Grade 6: Vegetable Production  
Fundamental Carpentry
- Grade 7: Field Crops  
General Shop Work for Rural Schools
- Grade 8: Poultry Production  
General Shop Work
- Grade 9: Animal Husbandry  
Advanced Shop Work
- Grade 10: Farm Management  
Advanced Shop Work

Preparation of English Language textbook manuscripts, beginning with Grade 3, presented a special problem. There are only four Nepali who have had training in English as a Foreign Language, and they were firmly established in teaching and administrative positions in private schools.

One of those four, Mr. Gaja Sunder Pradhan, who had studied English as a foreign language at London University, began, under a special dispensation, preparation of an English textbook manuscript for Grade 3. He worked at night, at home, on a part-time basis, as all temporary Writers wanted to do in the beginning in order to supplement their regular salaries. This arrangement proved unsatisfactory to everyone, and Mr. Pradhan came to understand the professional significance of being a full-time member of the Education Materials Organization. He resigned his teaching position. Now, as a member of the Writers Division, he is devoting all his time to preparing the series of English Language manuscripts.

He re-wrote his third grade manuscript, titled "My English Book," in the Writers Division. There he could discuss education principles and methods with

other writers and the American Advisor, have access to a number of resource English textbooks, and devote his full time to this work. The rewritten manuscript reflects originality, vitality, and variety in word uses, all of which were sadly lacking in his original attempt prepared by dim light at home, alone, after his day's teaching. The text as it now stands bodes well for the quality of the entire English Series when Mr. Pradhan completes it as a member of the Writers Division.

## **7. The Permanent Writers At Work**

By the fall of 1961 the original group of permanent Writers had returned from their study in the States. Mr. Netra Bahadur Thapa, who previously had been transferred from the Ministry of Education to serve in the Ministry of Finance, was brought back "home" to Education to head up the Writers Division. The whole concept of the Materials Organization was so new to His Majesty's Government that some upper-echelon officials who have approval powers little realized the significance of trained Writers in performing particular tasks in the Materials Organization. They were reluctant to assign them immediately to their new positions, finding it simpler to send them back to their former teaching work. In time, however, the problem was resolved, and every Education Materials participant was eventually placed permanently in the position for which he was hand-picked and trained in the States—an unusual record in participant program history.

When Mr. Thapa and the writers began their work the Division was "unknown and unsung". They quietly went to work on primary manuscripts and let their output justify their existence. They have developed a high degree of team work, so that whatever is produced is credited to the Organization rather than to any one individual. The Commission has established the principle of using only the name of the Education Materials Organization in the credit line. On the back cover of each publication is printed the specially-designed, official insignia of the Organization.

## **8. Manuscripts in Channel**

When a manuscript has been completed and reviewed by the Nepali "grammarian", who works part-time in the Division as an authority on Nepali Language usage, it is then ready for presentation to the Commission at its next regular Monday meeting. The Commission turns it over to an appropriate sub-committee which meets as often as necessary to arrive at a recommendation. They then return it to the Commission with any suggestions for change. The Commission accepts changes that seem desirable, and returns the manuscript to the Writers



When the Commission-approved manuscript is returned to the Writers Division, it is ready for general review by the heads of the Writers and Production Divisions, the Writer, the artist, and the two American Materials Advisors. As a group, they take up such questions as appropriateness of illustrations, layout, method of printing, use of color, page size, and selection of type faces. From this point on, there is constant cooperation between the two Divisions as the manuscript moves through the various stages of the metamorphosis by which it finally emerges as a beautiful new-type book.

#### 9. Output of Permanent Writers

By recent report, the Writers have completed some 30 different manuscripts, 25 of which have been approved by the Commission. These include both texts and teachers guides as follows:

- Nepali Reader for Grades 1 and 2
- Social Studies for Grades 1-4
- Crafts, or Self-Help for Grades 1-4
- Science for Grades 1-3
- Arithmetic for Grade 1

The Nepali Reader for Grade 3 and Arithmetic for Grade 2 are in process.

Manuscripts for the Illiterate Adult Program include:

- A Revised Reader, Parts 1 and 2
- Social Studies, Parts 1 and 2
- Literature, Parts 1 and 2
- Advanced Social Studies, Parts 1 and 2
- Arithmetic, Part 1

In addition, the Adult Writer assists the staff of the Adult Education Section of the Ministry in preparing materials for the 4-page news sheet published bi-weekly, as well as with content of weekly radio programs.

#### 10. The Division Wins its Way

Quietly, the Writers Division has won its way by the sheer reasonableness of its organization and the quality of its manuscripts. The Appointment Board of the Home Ministry has gained a clearer understanding of the connotation of the title "Writer" as used in the Materials Organization, and is now more willing to ascribe to them their proper grade and appointment. This point had to be won to ensure the proper professional standing of the Writers.



Baikuntha Lal Shrestha and I work on the series of Primary Crafts Books.

Through two Ministry of Education public exhibitions, held for two weeks each in Kathmandu, and an International Book Exhibit held in Babar Mahal, specific government agencies and the public as well have learned about the responsibilities and work of the Materials Organization. A conspicuous sign at the Sano Thimi site, listing the name *Education Materials Center* in both English and Nepali, has done much to highlight the Organization.

The International Book Exhibit was particularly important as an interpretive learning device. It was held in the big Babar Mahal Resources Library room for three weeks during June of 1963. Although planned by Mr. Thapa, Head of the Writers Division, it was a cooperative effort of all staff members of both Divisions. The Exhibit was opened by Assistant Minister of Education, Mr. Rajyaswar Devkota, as part of the cultural celebrations honoring His Majesty's Birthday. The opening was attended by representatives of the USAID Mission, the USIS, the Indian Aid Mission, the British Council, and by the Charge d'Affaires of the Israeli Legation, the Russian Ambassador, high-level officials of the Ministry of Education, and many private authors and publishers.

Throughout the previous year, books had been arriving through the various diplomatic missions having representatives accredited to Nepal. The Exhibit



At the International Book Exhibit, these young school girls have their first opportunity to browse among books to their hearts' content.

included books from the United States, Great Britain, Japan, the Philippines, Israel, Pakistan, Saudi Arabia, Iran, France, China, Poland, Yugoslavia, and the USSR. While it was open, more than 4000 visitors came to Babar Mahal to see it. Most of these people were classes of school children, with their teachers.

Mr. Thapa had arranged as a part of the Exhibit a display of books printed by Kathmandu private publishers. Through this device, the local firms gained their first understanding of the textbook standards set and maintained by the Materials Organization, and what they must do if their publishing work is to hold its own in the new life of Nepal.

As Nepal raises its economic and educational levels, there may come a time when writing and publishing education materials can be less centralized. But for the time being, with the scarcity of trained educators and limited skills and facilities

in printing, the present Organization seems the only satisfactory way to provide good books to the schools.

### C. Developing the Production and Distribution Division

As mentioned earlier, the Production and Distribution Division of the Education Materials Organization is sub-divided into functional units, each of which specializes in a particular activity. This pattern encourages individual development of skills and performance.

The Head of the Division, Mr. Yadunandan Khatri Chhetri, is a former secondary-school teacher who studied education principles and methods and preparation and use of education materials at Teachers College, Columbia University. He served for several months as a member of the Writers Division. His training and practical education experience are most advantageous in bringing about close understanding and cooperation between manuscript Writers and the staff of the Production Division.

Under Mr. K. C., the work of the Division is classified into four general areas: (1) processing manuscripts, (2) administering the Division, (3) staff training, (4) audio-visual services required by schools, institutions of higher learning, and government agencies.

#### I. Processing Section

Through the operating Units described below, the Processing Section performs all operations concerned with the conversion of manuscripts into textbooks and supplementary education materials.

*Graphic Arts.* The Graphic Arts Unit is under Mr. Jayadish Rajbhandari, who studied a year at Indiana University under a participant grant. He is assisted by three full-time artists, one of whom is Mr. Keshava Duwari, who trained five years in Bombay. This Unit has illustrated twelve textbook manuscripts as well as completing the artwork on twelve large silk-screen posters and 20 maps and charts for use in adult classes and the schools. The Unit is responsible for supplying all required artwork, including sketches, drawings, paintings, lettering, and silk-screen designs. Their services are called upon for preparing displays and exhibits. Their work may be used directly or reproduced by photographic or photomechanical processes.

*Photography.* Closely allied to the work of the Graphic Arts Unit is the Photography Unit, which is responsible for all photography not connected with printing reproduction processes. Under Mr. Bakhat Bahadur Chitrakar, who studied four



Illustrations are now recognized as important elements of primary textbooks. Mr. Brewster consults with staff artists on reproduction quality of all water-color drawings for textbooks before they are sent to the printer.

years at Bangalore, India, the Unit produces black-and-white photographs, filmstrips and slide sets in both black-and-white and color as needed, and all related work. Recently, Mr. Chitrakar visited several different areas of Nepal to make photographs of life in varying communities as aids to the Graphic Artists in more realistically illustrating manuscripts from the Writers Division.

*Printing and Duplicating.* Upon completion of the new permanent Education Materials Center at Sano Thimi, the Production and Distribution Division will be staffed and equipped to process every manuscript prepared by the Writers Division, from the typewritten page to the illustrated, printed and bound volume. But, at present, the picture in Kathmandu is a far different story. Plates for book illustrations cannot be made in Nepal, but must be ordered from India. No offset work can be done locally. None of the local commercial presses can yet do color printing satisfactorily, such as is now being used in primary textbooks.

The present small Education Press recently doubled its productive capacity through purchase of a second automatic cylinder press, and a new typesetting

machine, with hard currency made available by the Ministry of Finance of GON. Even so, it can turn out only six primary textbooks a year.

The two-year delay in land purchase for the Center has resulted in a similar delay in erection of the new Materials Center buildings and in installation of new presses and other equipment required to print materials in quantity. This equipment is now safely in storage.

Head of the Printing and Duplicating Unit is Mr. Hikmat Bahadur Malla, who studied Printing Management for a year at South Dakota State Teachers College, under a participant grant. He is operating the small presses efficiently and improving the skills of his staff, but he cannot overcome the problems caused by delay in land purchase. He has printed 60,000 copies each of two primary books for Grade 1 – a Social Studies text and a Crafts text, each with teachers guide, and 10,000 copies of a teachers manual in physical education.

With completion of manuscripts outdistancing the local printing capacity, there was but one thing to do. The FY 1963-64 Project Agreement authorized the Materials Organization to contract with printing firms in India for printing textbooks over and above what could be done in the Education Press until the Center is in operation at Sano Thimi. Thus, books can be supplied to the schools. The Cabinet authorized Mr. K. C. and Mr. Brewster to take four manuscripts to Calcutta, and with the Nepalese Consul General, to act as a board to call for bids from six selected printing firms, and to choose two – one for letterpress work and one for offset. Completed primary books were to be delivered within three months, and 60,000 of each shipped to Kathmandu. These four books, which will arrive shortly, are a Nepali Reader and a Science textbook for Grade 1, and a Nepali Reader and a Crafts text for Grade 2. Each manuscript was accompanied by a teachers guide. Very soon, a total of 360,000 copies of modern primary texts will be sent out to the schools.

The Center's Education Press is now ready to begin running off on its new press 10,000 poster sets of the "National Aims of Modern Education in Nepal," making a total of 40,000 copies in all, and 60,000 copies of the Social Studies text for Grade 2 on the older machine.

The Duplicating staff undertook a stupendous task when it set about mimeographing 5000 copies of the manuscript of a modern arithmetic book for Grade 1, consisting of 100 pages. Type copy was set by the Press. A layout was made from the type and original drawings; then stencils were prepared on an electronic stencil cutter. By using hand methods, in the truest sense, copies of a good arithmetic were available for a workshop which was training normal school teachers.



The first grade Social Studies Book opens a new world of education to both teachers and pupils.

*Radio Programing.* Although the Sound Recording and Radio Programing Unit has not achieved its full stride, programs are being produced for general listening and for adult classes. Reception has been limited chiefly to the Valley and to those places which have received commodity radios.

The Head of this Unit, also serving the Writers Division as radio script Writer, is Mr. Narayan Bahadur Rajbhandari who studied a year at Syracuse University under a participant grant.

*Equipment Maintenance.* The Technical Equipment Maintenance Unit provides maintenance and repair service for the specialized equipment used in the four production units, above.

## 2. Audio-Visual Services Section

Requests from schools and other educational institutions for A-V Services are filled by this Section. These services are limited to the range of its mobile

equipment, but information and advice which can be transmitted by mail or other means of communication are provided to schools beyond reach. Upon demand, workshops and special training courses will be given for teachers in the schools and colleges of Nepal. Emphasis is on simple, easy-to-produce materials.

### 3. Training Section

Responsibilities for training are divided into two categories: (a) staff training, and (b) teacher training.

Staff training is intended to take care of needs for upgrading the level of performance of the Division staff. On-the-job training in printing, graphic arts, photography, radio and sound recording, property management, and equipment maintenance forms the core of the staff training program. Training in India and other countries is also utilized.

Training abroad and on the job will be given to personnel in the Management Section.

Teacher training will be conducted in collaboration with the colleges and schools, and will be given in the Audio-Visual field as required. This program will supplement that offered in the College of Education, and is designed to take advantage of the superior equipment and facilities of the Center.

### 4. Management Section

This Section handles details of business administration for the Education Materials Center. It is sub-divided into the following operational Units:

*Accounting Unit.* Responsible for all record-keeping related to fiscal activities of the Center. It is accountable to the Accountant-General and the Auditor-General of GON.

*Personnel Unit.* Handles details of hiring, evaluation, promotion, and discharge of Production and Distribution Division personnel.

*Property Management and Distribution Unit.* Responsible for procurement, storage, and distribution of commodities required not only by the Center but also by all other Education Projects. It also handles distribution of completed education materials turned out by the Processing Section.

*Building and Grounds Unit.* Responsible for keeping the entire Sano Thimi plant in good condition. Staff will include carpenters, plumbers, electricians, painters, gardeners, and others.

*Public Information Unit.* Responsible for supplying information to other agencies of GON, and to newspapers and the radio station, when appropriate, regarding the program of the Education Materials Organization.

## VI. Education Materials Go Out to the Classes

The landlocked Kingdom of Nepal extends for some 500 miles east and west. It lies between India to the south and Tibet to the north just over the great Himalayan Range, which claims seven of the highest mountains in the world—among them Mount Everest.

The country is divided into four regions running east and west:

1. The Himalayan Range
2. The central zone of lower slopes and valleys, the largest of which is the Kathmandu Valley
3. The jungle area—sub-tropical and humid
4. The Tarai, 16 to 20 miles wide, also sub-tropical and humid. This is part of the great Gangetic Plain extending down into India.

The population totals over 9,300,000, with an estimated 93 percent actively working on the land in agriculture, herding, forestry, and fishing. Approximately 95 percent of the men and 98 percent of the women are illiterate.

### A. Communication Facilities

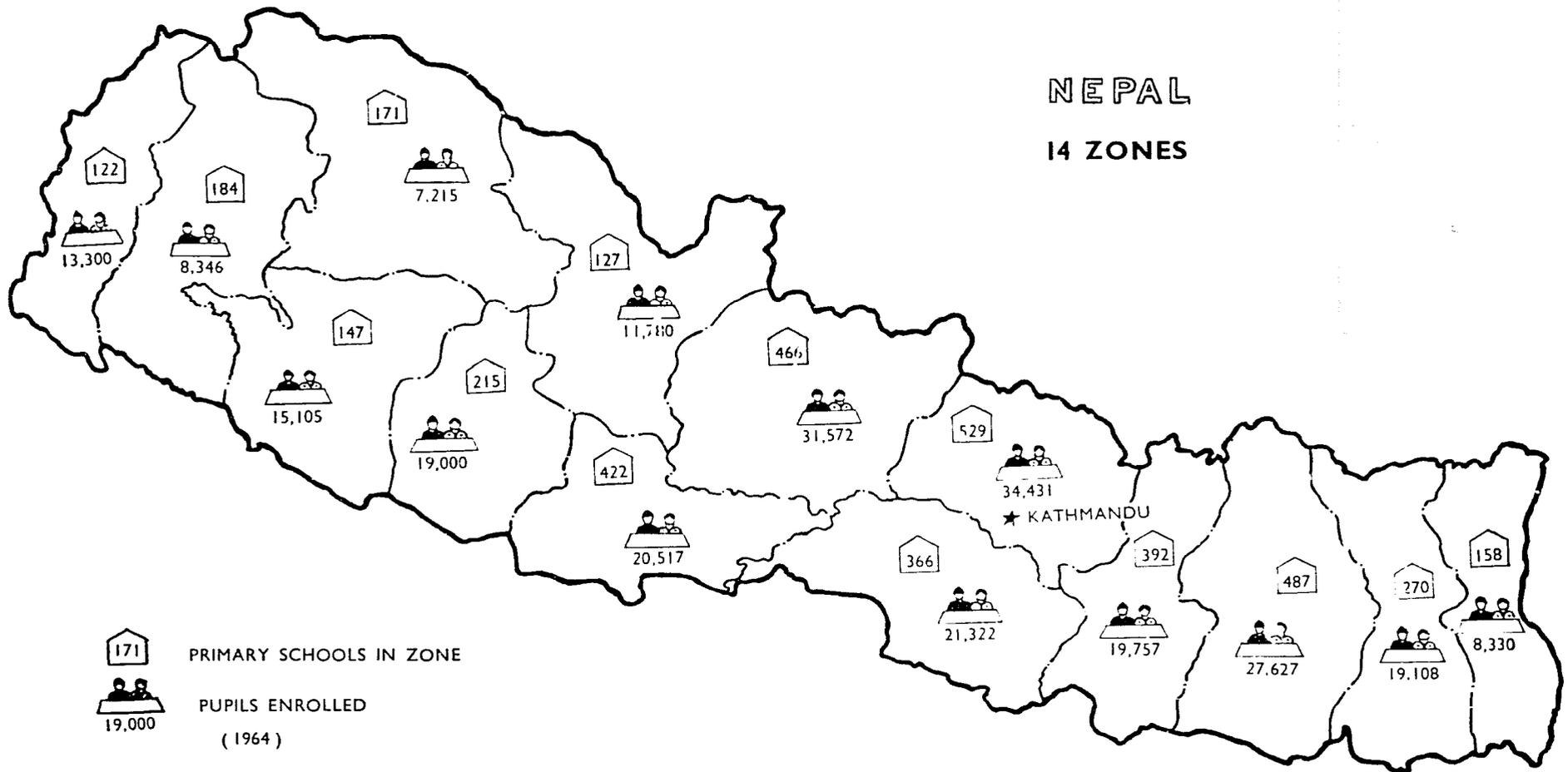
It was not until early in 1956 that the first road connecting Kathmandu with India was opened to traffic, and it still is the only road connecting the Kathmandu Valley with the outside world. Before this road was built, all imports, including pianos for the Rana palaces, and automobiles for use on the few Kathmandu roads, were carried into the Valley strapped to bamboo poles resting on the shoulders of men. At present, some half dozen trucking lines operate over this road between Kathmandu and truck and rail terminals on the Indian border.

Nepal has two short railways, each connecting with an Indian line. One, 30 miles in length, runs from Raxaul, on the border, to Amlekhganj in Nepal. The other of 27 miles, connects Jayanagar, on the border, with Janakpur inside Nepal.

Nepal entered the air age in the winter of 1946 when Lord Mountbatten, of India, landed at Simra. In July of 1947, his same pilot, Mr. H. M. Weatherall, with Rana permission, landed his plane near Kathmandu where Gaucher Airport is now located. During the 1950-51 Revolution against the Ranas, the Indian Government flew a special plane to the Gaucher field to remove King Tribhuvan and the Royal Family to Delhi. Later in 1951, again with Mr. Weatherall as pilot, the Indian National Airways opened bi-weekly flights between Calcutta and Kathmandu, via Patna. A year later the Indian Airlines Corporation took over the flights, and in 1956 organized internal services within Nepal. Later, the Royal

# NEPAL

## 14 ZONES



PRIMARY SCHOOLS IN ZONE

PUPILS ENROLLED  
(1964)

Nepal Airlines Corporation was established, took over the internal services, and in 1960 began direct flight services between Kathmandu and Calcutta and Delhi.

At present, there are 13 landing fields scattered over the lower half of the country. These are regularly served by DC-3 flights from Kathmandu. There are also a number of short-take-off-and-landing strips which likely will soon be served regularly by smaller planes such as the Pilatus-Porter. These trans-country flights carry both passengers and freight, often on a sort of shuttle service. In addition to these services, limited helicopter service is available to USAID technicians bent on field work.

In view of these very recent and extremely limited transportation facilities, it is understandable why, throughout its long history, the backs of men, women, and



Until more vehicular roads are opened throughout Nepal, the backs of men, women, and children must be utilized for movement of education materials in many outlying areas, deep in the interior.

children have borne the weight of all goods transported throughout Nepal, and why Nepali are the best long-distance walkers in the world. The porter is a most essential and highly-valued member of every trek, whether he be carrying personal belongings and education materials for an American Education Advisor en route to a workshop or establishing a high base camp for the American Mount Everest team.

With this picture of Nepal's transportation situation in mind, one may well ask, "How can the new education materials reach the schools?" First, let us see where these 4500 primary schools, with their 257,000 pupils are located. A glance at a recent map showing location of the school population immediately reveals the fact that these schools are well distributed over the entire spread of the 14 Zones -- even in the north, on the slopes and under the shadows of the Himalayan Range. To achieve the ultimate aim of all aspects of the work connected with the Education Materials Organization -- to place the new books and materials in the hands of the children -- every transportation device known to Nepal must be utilized to the fullest extent over the coming years.

At the headquarters of each of the 14 Zones, there is stationed an education official who is responsible directly to the Ministry. He is provided with money necessary for storage of material: until they can go on to schools, and for their transportation out to the schools. It is his duty to follow the instructions of the Education Materials Organization in distributing the materials to each of the education officials in his Zone, and in some cases directly to the schools.

Transportation facilities used to reach the Zonal center may be the airplane, a trucking line, or porters. From the Zonal distribution office, materials may go to the district via Indian railway running from the border, east or west in India, and back north again to a center in Nepal; or they may go direct by porter.

## **B. Sending Out Materials to Illiterate Adults**

The first materials to be distributed by the Materials Organization were reading books and pamphlets for the classes of illiterate adults. To date, approximately 114,000 copies of readers and other books have gone to classes located in each of the 75 districts. Within the past eight months 65,000 copies of a recently established Adult bi-weekly supplementary news sheet have been distributed through the Zonal officers. All these materials are first counted and then sewn firmly into burlap bags addressed to their ultimate destination. Other materials distributed include 17 Coleman kerosene lanterns, 35 reconditioned battery radios, 28 new transistor radios, and 30 hand-operated sewing machines.

### C. Primary Schools Receive Materials

A year and a half ago, orders were placed for over 4000 galvanized lock-boxes for distribution to primary schools. These were packed with supplies such as the schools had never had before. Over 3300 boxes have been sent out by air, truck, rail, and porter to the Zonal Education Officers. Each box contains the following: a small hand saw, a hammer, nails, lead pencils, colored pencils, pens, ink, a bundle of newsprint, a supply of exercise books, a tape measure, a can of



Through far-flung villages, trains of porters, such as these, carry their precious loads of materials to the rural schools.

blackboard paint, a flannel-board with instructions for use, the National Flag, copies of the National Anthem, and a framed portrait of His Majesty, the King. From three weeks to five months have elapsed between the time the boxes left the Center in Kathmandu until an acknowledgment of receipt reached Mr. K. C.'s desk.

The second large distribution shipment to primary schools consisted of 56,000 copies of the new Social Studies Book for Grade 1, printed in four colors.



Method of using new education materials is an important part of teacher-training work in education workshops held at various rural centers.

These were wrapped in packages of 25 copies, then packed in wooden boxes lined with waterproof paper. The boxes were sealed in size to facilitate porter carriage. The first books were sent out in December 1963. From one to two months elapse before letters acknowledging receipt come from the Zonal Officers.

#### D. Commodities and Materials for the Secondary Schools

Twenty-nine of the high schools offering the general curriculum have each received kits of equipment for teaching general science according to methods evolved in the secondary-level workshops. Five secondary schools selected for conversion to the multi-purpose curriculum have been more amply supplied with materials. The Production Division of the Materials Organization has sent the following sets of materials to these five schools:

1. *For use in the agriculture curriculum*: garden hoes and rakes, wheel-hoes, local-type garden tools, soil-test equipment, science equipment for agriculture, vegetable seeds, local and improved varieties of flower seeds.
2. *For use in the trades and industry curriculum*: a complete set of hand

tools for carpentry; such power tools as a bench saw, jointer-planer, electric drill; hand-power equipment; a soldering kit.

3. *For use in the poultry curriculum*: an incubator, a brooder, an egg-candler, an automatic waterer.
4. *For use in the commercial curriculum*: typewriters, an adding machine, a filing cabinet, and furniture for business education.

Materials and equipment for home science have been distributed both to the general secondary schools and to five converting to the multi-purpose curriculum.

Home science equipment, which has been personally delivered, for the most part to the Multi-purpose Schools, includes 3-burner kerosene stoves, sewing machines, pressure cookers, measuring cups and spoons, as well as thermometers for use in ovens, refrigerators, and deep-fat frying, a favorite Nepali method of cooking.

Eleven ovens made locally from 5-gallon kerosene tins have been distributed—a highly-prized addition to the kitchen. Five hundred copies each of mimeographed pamphlets prepared by the Nepali home science staff and the American Advisor, have been sent to schools. The subjects include the following:

- How to Make a Sari Apron
- Use and Care of the Sewing Machine
- Home Science in Nepal
- How to Cut and Join and Bias Tape
- Muscle and Bone Development of Children
- How to Make a Nutrition Flannelgraph, including script.

A Physical Education Drill text for use by teachers in secondary schools has been distributed as follows: 260 copies to general secondary schools, 300 to Army Headquarters for their use, 100 to the Boy Scouts organization.

In distributing materials within the Kathmandu Valley, and in serving the schools, staff of the Production and Distribution Division often use the stake-body pickup truck, the jeep station wagon, or the audio-visual mobile unit, all of which were supplied by USAID through commodity funds.

Within a few weeks, five more primary books will come off the Center's presses and from Calcutta printers. The Production and Distribution Division will then have more than 300,000 books on hand for packing and shipping to schools located in all parts of Nepal. Experience now being gained by the Division staff, as well as by the Zonal and District Officers, will greatly facilitate their flow, and will reduce the elapsed time between the date of shipment from Babar Mahal and the date when they actually reach the hands of school children and illiterate adults.



## VII. Epilogue

### The Technician—Master Craftsman in Developing Countries

When the 13 American Colonies declared their political independence from Great Britain in 1776, and then began developing the western wilderness, the historical period of newly developing countries was launched. Now, two centuries later, the movement has reached its zenith and has shaken whole populations throughout the world.

The Pilgrims of the Mayflower, when they set foot on Plymouth Rock, brought with them the highly developed cultural order of Europe. They were part of the great global exploration movement, and predated the Industrial Revolution and its period of scientific invention in England by less than 100 years. They had technicians in their midst. The skills of reading and writing had already earned social prestige. The men and women who later moved west took with them these social skills and values, and the first buildings erected of timber, stone, or sod in a settlement were first a church and next a schoolhouse.

Today, in the newly developing countries, the daily lives of the mass of the people, as throughout generations, have been little changed by explorations, industrial revolutions, or education. They have few technicians among them. There is, however, an awareness of a kind of life different from anything they have seen or experienced. They no longer meekly accept the idea that their lot is one of poor crops, poverty, ignorance, and ill health. They do not know how to arrive at this better life for themselves and their children, but they are stirred by a "divine discontent". The vision is present, although indistinct.

During the past 14 years, hundreds of Americans have been sent out by the same government that started this social revolution in 1776 to help these underprivileged masses find their way to a better life. They are known by the term "technician", designating, in the phraseology of Webster, "a person whose teaching is accepted or followed". They are also master craftsmen because, again according to Webster, "they must possess a high degree of skill, ingenuity, and dexterity". They must be soundly grounded in specific knowledge such as education, agriculture, health, industry. These technicians are men and women who are bringing to many underdeveloped countries a clearer vision of a new life, and an understanding of the way to obtain it.

Even today, there is no well-documented blueprint to guide technicians in working with governments and other leaders in newly developing countries. It boils down to a matter of being well prepared in the subject-matter field, sensitive to values and habits of a culture very different from their own, and a willingness

to move at the rate of development familiar to the particular country—not to that of vitamin-fed Americans whose systems are geared to feeding the family from the supermarket and travelling by jet airplane.

The technicians are the people now working shoulder-to-shoulder, day by day, with officials of local governments who carry on their backs, not education materials, but the burden of literally changing the habits of the masses from age-old customs to new ways of doing things as necessitated by the age of power-driven machinery. Technicians work closely with these local leaders first in defining goals, then in deciding on methods of work and, most likely, on the speed of progress that may be expected. Next, comes a period of communicating to others in higher authority the elements of the program, convincing them of its soundness, making budgets, finding capable officials to perform the work, and training additional staff. Later, comes the period of cooperating in carrying out every aspect of the program, recognizing mistakes and their causes, readjusting the program to correct errors or weaknesses.

Since the newly developing country must change in all ways at once, there will be need over a period of years for long-term technicians to assist in constant evaluation and re-evaluation of goals and methods. The importance of skilled advisory technicians cannot be over-emphasized. Although good planning is a necessity, the actual selling—persuading and convincing—and finally changing the social pattern, requires dedicated, hard-working, flexible-minded advisors. In Nepal, the Technical Education Materials Advisors, in addition to all the foregoing activities, have had the task of weeding out the deadwood from an outmoded, lifeless organization, re-directing the thinking of the remaining staff, and welding them and additional members into a structure entirely different in concept and educational philosophy, but entirely suited to the temperament and aims of the new Nepal.

Only through effective efforts of the most capable of advisor-technicians can participants trained abroad be utilized properly, and the money invested in the newly developing nations be wisely spent. It is a well-founded, traditionally American way to combine adequate financing and the best technical skill in launching new developments. There is no reason to believe that the same method is unnecessary in the newly developing countries where USAID programs are operating. The time will come when local officials will have gained the skills and the judgment to carry forward, alone, the development of their countries. When this time will come depends upon the speed with which a country can literally move, in all aspects of daily living, from dependence upon tradition and superstition to reliance upon scientific laboratory findings. American technicians cannot

set the rate of this speed. They can only help release indigenous forces and assist in guiding them wisely into ways of the twentieth century.

When pressure builds up for USAID program expenditures to be curtailed, those viewing the work from the United States usually suggest reducing first the number of technicians working abroad. The amounts for training participants and for purchasing commodities seem more essential to the layman.

Americans experienced in development work know full well that training of local educators at home or abroad does not pay dividends unless American technicians are present to assist in the effective use of newly acquired skills. Efficient equipment and modern materials from America are wasted if distributed throughout an underdeveloped country without cooperation of American technicians and local educators in supervising their use.

Unless USAID provides technicians for some time to come who pour into their daily work vision, wisdom, skill, and energy, these strategic programs will fail their purpose of assisting newly developing countries to become strong, independent, democratic nations.