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F I N A L R E P O R T

DETERMINATION AND REVIEW OF PROBLEMS
ENCOUNTERED IN THE PRODUCTION AND
UTILIZATION OF EDUCATIONAL MATERIALS
IN NEPAL

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PREFACE

At the invitation of the Agency for International Development, and at the request of the AID Mission in Nepal, I went to Kathmandu--arriving there 5 November 1970 and departing 20 November 1970.

My major area of interest was in the Janak Educational Materials Center which had been recently transferred by USAID/N to the Government of Nepal. The essential function of JEMO is to produce textbooks for the primary grades of the nation's schools. It is directly involved in the writing of textbooks and teachers' guides, preparing the manuscripts for the press, manufacturing the texts and guides, and warehousing and distributing them. In my frequent visits to Sano Thimi, where the facilities of JEMO are located (on the outskirts of Kathmandu), I met with the Acting Chief Administrator, all section chiefs, many of the writers, and also with the artists, press supervisors, and others in various positions. I also discussed the programs with the American advisors at JEMO, several of the Southern Illinois University team members, and other Americans in the USAID mission. I concluded my visit to Nepal with a meeting with the Director General of the Department of Education and reviewed with him some of my observations.

My report on my tour attempts to review the purpose of the curriculum and textbook program supported by AID, to determine the publishing and manufacturing problems of the program, and to suggest certain efforts that should be considered in meeting these problems.

A brief tour, even though it be an intensive one, can only suggest the efforts that should be considered. I examined the program on the bases of my experience in publishing in America, my work on distribution in India, my study of the curriculum program in Afghanistan. Undoubtedly there are many similarities between this experience and the situation in Nepal; however, there are also cultural differences that no one could grasp fully in such a short visit, and I can only hope that my recommendations take such differences into sufficient account. I also recognize that I shall have made some errors--although I believe they do not radically affect my report--in describing procedures or responsibilities of the staff at JEMO or the offices of the Government of Nepal.

I had the complete cooperation of both Nepali and Americans in my survey. Although there were differences of opinion among each national group and between each, all were aware of the need for the program and were eager to see it succeed.

BACKGROUND

The current educational development programs in Nepal are derived from the 1956 report of Nepal's National Commission for Planning Education. It stated

Next to the shortage of teachers, the most serious handicap to good educational experiences in the schools of Nepal today is the almost total lack of instructional aids.

Even though the Commission issued this report in 1956, three years later no teachers' guides or manuals had been published. The sole effort by the Department of Education to provide instructional materials was its publication of lists of "approved" books and of "approved" booksellers who were supposed to stock the books.

In 1959 the Ministry of Education and USAID/Nepal signed a project Agreement on "Education Development." This agreement provided that "an Education Commission be established to select, prepare, produce, and distribute educational teaching and learning materials for the entire educational system, utilizing the facilities of the Ministry of Education's Publication Bureau and Printing Press. "The Commission will (would) function within the curriculum framework of the Ministry of Education and will (would) ensure a continuing flow of texts, materials, aids, and related reading materials."

The 1960 Project Agreement restated the needs and continued the support of USAID in implementing these goals. The renewal of this support has continued each year, and in 1969 (for FY 1970) the Statement of Purpose for the Project Agreement for Education Materials read:

This is a continuing activity designed to establish an adequate education materials production facility managed and operated by Nepalese in order to write and publish textbooks and supplementary instructional aids of good quality for the schools of Nepal. The facility is not designed to meet all of Nepal's requirements for textbooks but to provide leadership in quality textbook production for all private and public producers.

It is of interest to note that the 1959 agreement had a larger scope in that it provided the Education Commission would "select, prepare, produce, and distribute educational teaching and learning materials for the entire (my italics) educational

system. . . ." The FY1971 Program Agreement has been submitted as a continuing activity.

INTRODUCTION

This report considers the present method and operation of the selection, preparation, production, and distribution of primary textbooks. It is followed by general comments and then by recommendations and suggestions.

Analysis of the program is limited to primary textbooks, for the educational materials activity has not entered into the secondary school materials to any significant extent. (There are a Science Teaching Enrichment Program (STEP) and a Program Revision in Mathematics Education (PRIME) directed at secondary education; however, at this time they do not use the facilities of Janak Educational Materials Organization (JEMO). Although I discussed these programs in Nepal, I was not directly concerned with them in this survey and have not commented on them in my report). However, in many respects the recommendations of this report may be applied to an activity in which secondary school materials are produced. (In Nepal primary grades are I through V and secondary grades are VI through X.)

My comments on each section will imply, of course, recommendations, for my discussion will cover both program successes and capabilities and failures and needs. I have attempted to observe the program from the point of view of Nepali objectives as stated in the original report of the National Commission for Planning Education.

PREPARATION AND SELECTION OF PRIMARY TEXTBOOKS

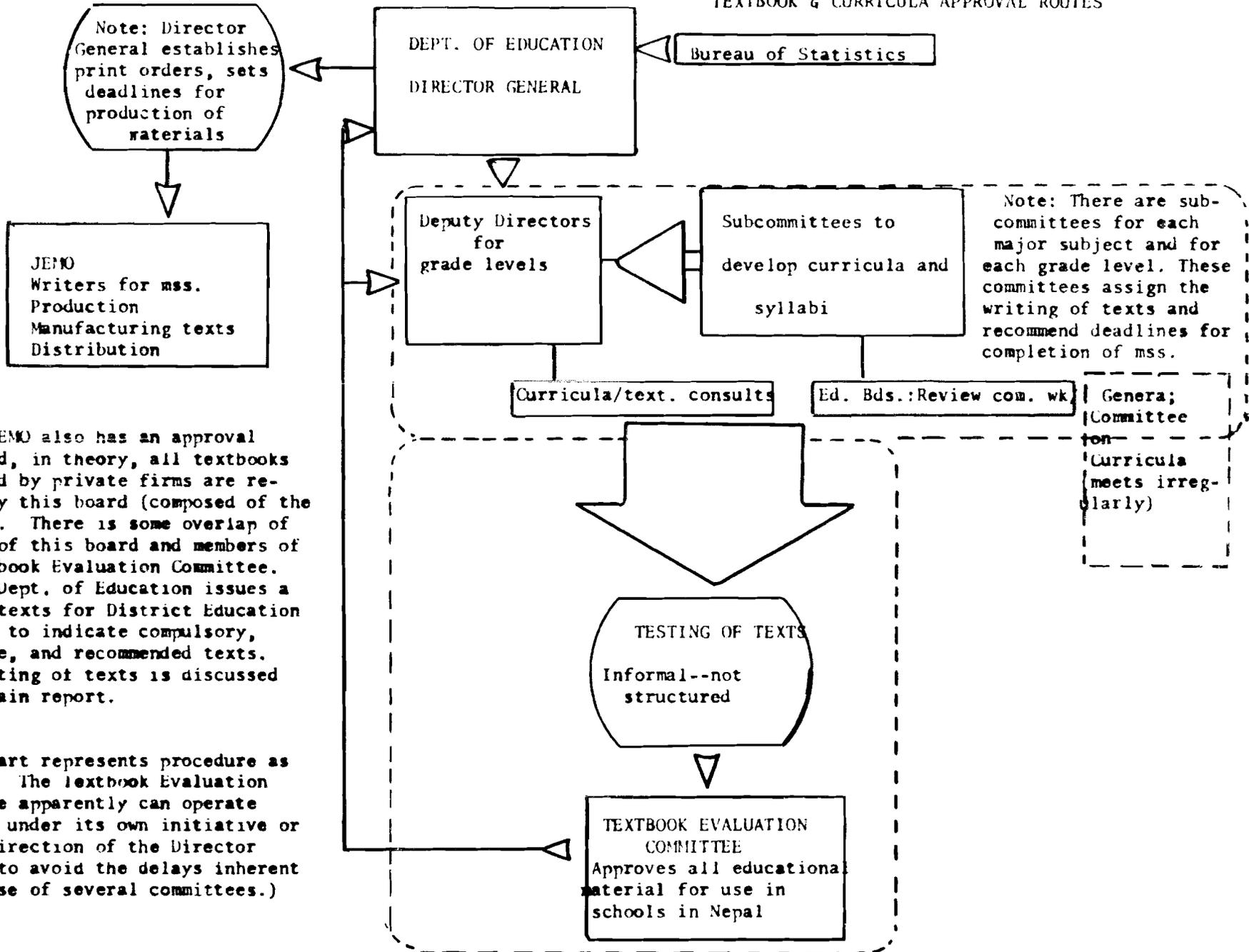
The approval route for curricula and textbooks is circuitous (see the figure

on the following page). Within the Ministry of Education is the Department of Education under the Director General. He has deputy directors for different grade levels. Attached to each deputy director is a consultant in curriculum and textbook planning. For each grade and for each subject there are subcommittees reporting to the deputy directors, and these subcommittees are responsible for developing curricula and syllabi. Each subcommittee has an editorial board for reviewing the work of the subcommittee. The subcommittees either assign the writing of the texts and establish deadlines for the completion of the manuscripts or recommend writers and deadlines to the deputy directors for the concurrence of the Director General.

There is also a general committee on curricula whose function is to ensure a continuity and coordination of all the curricula, but this committee appears to meet irregularly and does not work in any significant depth.

Within this framework there is also the Textbook Evaluation Committee that must approve all material for educational use in Nepal's schools. This committee is concerned not only with the materials generated within the Department of Education but also with that of private publishers. In theory all material is tested and the results presented to the Textbook Evaluation Committee which may require a revision of the texts. This Committee reports to the Director General who then establishes the quantities of texts required. He bases his estimates on data provided by the Bureau of Statistics. At this time, the Director General also sets the deadlines when the printed materials must be available. These deadlines appear to be based on the recommendations of the curricula and syllabi subcommittees, the Textbook Evaluation Committee, and on information from other sources within the Department. Although there is some interlocking memberships of the various

TEXTBOOK & CURRICULA APPROVAL ROUTES



Notes: JEMO also has an approval board and, in theory, all textbooks published by private firms are reviewed by this board (composed of the writers). There is some overlap of members of this board and members of the Textbook Evaluation Committee.

The Dept. of Education issues a list of texts for District Education Officers to indicate compulsory, alternate, and recommended texts.

Testing of texts is discussed in the main report.

(This chart represents procedure as of 1970. The Textbook Evaluation Committee apparently can operate directly under its own initiative or at the direction of the Director General to avoid the delays inherent in the use of several committees.)

committees, I did not find any formalized coordination that took into account the capabilities and the work schedules of JEMO.

Within JEMO there is also an approval board, and in theory all textbooks by outside publishers are reviewed by this board--I assume essentially for content and competency of presentation. The (Acting) Chief Administrator of JEMO is on this board and on the Textbook Evaluation Committee. The Department of Education, from the information provided by these boards, issues a list of textbooks for District Education Officers (DEOs) for compulsory, alternate, and recommended texts.

Although there is an obvious relationship between establishing a curriculum and writing a textbook, in these early days of curriculum preparation and revision there are frequent instances in which texts have been written at JEMO and elsewhere without a curriculum available or without reference to the available curriculum. This lack of coordination requires rewriting of texts and has meant that some texts now in use are not related to the approved curricula.

For example, the first three grades of language arts must be rewritten because they were issued before a curriculum was prepared. Grades 1, 2, and 3 of mathematics were prepared under an old curriculum and must be revised. Grade 4 mathematics is being revised before publication to conform to the new curriculum, and this means a lack of sequence in the books--confusing to both student and teacher. However, this current confusion may be resolved by the time the entire new curriculum is completed sometime in 1972 or 1973.

In some instances texts are written and published before teachers' guides are written, and this is a serious problem in properly using the new texts. Teachers often use the new texts in the same rote fashion of teaching used for many years in

Nepal.

JANAK EDUCATION MATERIALS ORGANIZATION

The simplified organization chart on the following page indicates the structure of JEMO. It is now divided into six sections. The three operational sections are writers, production, and the press. One section, the audiovisual section, is basically a service unit for the Department of Education. The other two sections, warehouse and distribution and the administrative section, are basically administrative support units.

WRITERS SECTION (JEMO)

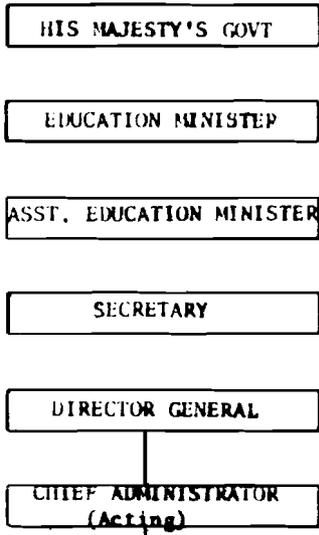
(This discussion is limited to texts prepared by JEMO. Texts prepared by outside publishers are written on contract or with royalty to the author. In some instances JEMO writers also write for private publishers.)

JEMO maintains a staff of writers, gazetted by the Government of Nepal, and nearly all have had a background in education. Those who have been teachers have taught in secondary schools, colleges, or the university. None have had primary teaching experience. There is one writer for each of the areas shown on the JEMO organization chart (although home science has two writers, and the chief editor of Balak does some writing in addition to his work on this children's periodical.) In addition, there are two writers assigned to adult education.

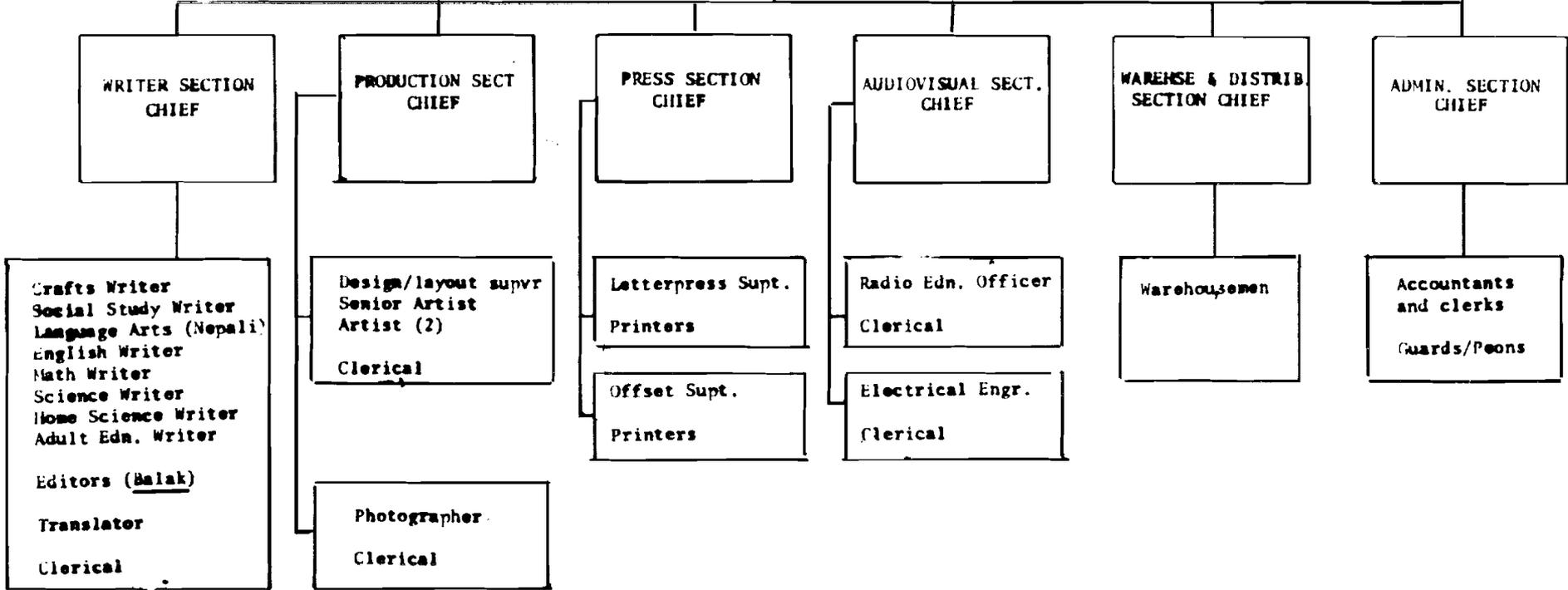
American assistance is limited to a writer-editor who works closely with the individual writers but acts more as a coordinator than as a subject specialist. A USAID/N contract with an Indian language arts specialist provides assistance in this area.

Under the present procedure, a writer at JEMO is assigned by the curriculum

JANAK EDUCATIONAL MATERIALS CENTER
NEPAL
(Simplified Organization Chart, 1970)



RATINGS	
G-II-A	3
G-II-T	5
G-III-A	22
NonG-I-T	25
NonG-I-A	7
NonG-II-T	30
NonG-II-A	13
NonG-III-T	37
NonG-III-A	10
NonG-IV-A	12
Peons/Guards	26
TOTAL	190



7
8

subcommittee. A writer must write not only the texts in the subject but also the teachers' guides, following the approved curricula and syllabi. (As I have noted before, there have been a number of pragmatic variations and texts have been written without approved curricula and teachers' guides have been prepared after texts have been placed in use. In the schools I visited, where texts were available, no teachers' guides were on hand.)

When the manuscript has been written, it is tested. The manuscript is usually reproduced in a crude mimeograph form and sent to four or five schools. It is issued with only the rough illustrations that the writer may have drawn, or it may be sent to the schools without illustrations. The writer may, or may not, have the opportunity to see some portions of the text used in actual classes. Opinions are written out by headmasters and teachers, but these are often only comments on the accuracy of the content and do not pertain to the methodology or the pertinence to the curriculum. These opinions go to the Textbooks Evaluation Committee which reviews the text and the critical comment. The committee returns the manuscript to JEMO with its instructions for revisions, if any. In some instances it may request that the revised manuscript be returned to it for examination; in others--particularly where the writer is a member of the committee--it may not.

The writer then works with the JEMO artists on the illustrations required. The author suggests subjects for the art and approves the pencil sketches or the photographs before the final art is prepared.

In the event (such as with mathematics or the sciences) JEMO typesetters are unfamiliar with the typographical requirements of a manuscript, the writer must work directly with the compositors. Proofreading also must be done by the writers, for there is only one unskilled proofreader at the press. (In practice the writers make many editorial alterations in the galley, page, and press proofs, adding to the

over all costs of composition and press makeready.)

Following the reading of galley and page proofs, the plates are made (for offset) or the forms are locked up (for letterpress) and the job goes on the presses. It is customary at JEMO to show a press proof (blue lines, brown lines, or silver prints--which are contact proofs for offset--are not made at JEMO). Apparently the press is actually stopped and held for approval of the press sheet. At times, even at this stage, the writer may make editorial changes.

The book is then printed, bound, and distributed.

Part of the writers' tasks continue past the preparation of the manuscript for press, therefore. These tasks continue into the production of the textbooks, and in the next section this overlap and need for production coordination is suggested.

I interviewed different writers and found their morale low. I believe they are depressed by the size of their tasks and by the lack of services to support their efforts. All seem to recognize that their materials are not sufficiently tested because of the short time allotted to the writing and production of a textbook. They also indicated that they do not get enough information from the users of the texts (the students and teachers in the schools) of the effectiveness of their work.

Other comments I received are:

1. It is difficult to get basic data and statistics required for mathematics, sciences, and social studies.
2. Limited transportation and lack of telephones isolate the writers from their committees and sources of information.
3. The JEMO library is without necessary reference works, a trained librarian, and is not a ready tool (perhaps because of the "accountability" methods used).

4. Experienced typists are nonexistent at JEMO and considerable time is required by writers to copyedit and correct poorly typed manuscripts.

5. Proofreaders who can read proofs for typographical errors and query the writers when necessary are lacking. (Proofreading is a new skill in Nepal, and perhaps a training course is needed.)

6. The artists are not trained as graphic artists and do not understand how to prepare their art for letterpress engravings or halftones or for the lithographic processes.

7. The compositors lack experience in setting mathematics and formulae; however, I think these skills should increase as the typesetters gain more experience, are provided with the proper tools, and learn an appreciation for their craft.

PRODUCTION SECTION (JEMO)

Originally at JEMO there were two wings: writers and production. As the project developed, and in line with the structure usual in publishing houses, JEMO was divided into four sections: writers, production, press, and audiovisual. This organization is a reasonable one for the operational levels. The Acting Chief Administrator supervises this organization, and in addition to these operational sections he has administrative services and warehousing and distribution reporting to him.

The production section has the responsibility for coordinating all phases of the preparation of the final manuscript and delivering it to the press section. This coordination includes providing art, photography, and design and layout for the book. The art group draws illustrations to the specifications of the writer. The

design group prepares a dummy, sizes the art, designates the type, estimates the character count to determine the number of pages in the book.

Although it is also the task of the production section to maintain a production schedule and work flow, the many variables (such as lack of water, breakdown of transformers, heat, cold, absences, etc.) have resulted in no true scheduling being either maintained or even established. The present method is that when a manuscript has been completed and is ready for press, it is turned over to the press section on an ad hoc basis. There is an annual work plan approved by the Department of Education; however, the plan is not adhered to by the quarter (the time elements used in the plan). It is not clear how the Department prepares this annual plan with any confidence, for it can receive no reliable scheduling data from the JEMO production section. Because the work load is at a low level, there is enough slack so that this lack of planning is not too meaningful. If the work load, as is hoped, reaches the level of productivity that is possible with the facilities available, this lack of scheduling will be disruptive to all the planning and to the operation of JEMO.

The production section recognizes that JEMO facilities are not well utilized; however, I was told that JEMO is optimistic that a full program will be in effect in the near future. I was not able to reconcile this optimism with the 1970-71 plan of work, for the calendar of operations for the year does not suggest a full work load.

PRESS SECTION (JEMO)

This section is also called the printing department and includes composition, film and platemaking, letterpress, offset, and a bindery. By crude calculations I estimated that the calendar of operations for 1970-71 would require something

around 7 or 8 million impressions (assuming that an impression is printing one side of a form, with 8 pages to the form). The press section chief estimated that at one hundred percent capacity (on a single shift) his section can produce 22 million impressions. If we estimate that the press can operate 70 percent of the time--allowing for normal down time for maintenance and emergencies--we have a press capability of approximately 15 million impressions. This means that to produce the JEMO calendar of operations requires only 47 percent of the press's available operating time. I also checked with the press's American specialist, who estimated that the printing facility could produce on one shift 1,500,000 books (averaging 128 pages). The calendar of operations projects about 700,000 books. This calculation also works out to 47 percent capacity. If two shifts were to work (a 10-hour day) the capacity would increase to around 2,250,000 books a year.

In actual practice at this time the press facilities appear to be used about 30 percent of the time. Capital equipment must work as near a full shift as possible for it to be economical. We must conclude that the press section is either over-equipped or insufficiently used.

The press section has no training program in any formal way for maintaining and broadening the skills of its employees and for training new employees. It is uncertain if there are enough trained personnel to operate a second shift. Certain employees who require special tools (such as the compositors) do not have these for their individual use but must pass line gauges, composing sticks, etc. back and forth as they work.

There is no cost accounting, no press scheduling of any sophistication, no estimator, and no production control department as such. The press section chief must fill all these duties himself and at times he is involved in the actual

maintenance of equipment. I could not find if there is any depreciation factor considered on the equipment.

Despite these shortcomings, the press as it stands today is well equipped and the personnel seem competent. It is possibly the best printing plant in Nepal. I believe it is capable of operating without a permanent foreign advisor, although it likely will be useful in having specialists or advisors on short-term tours, particularly when new techniques or new equipment is introduced. Foreign specialists may be particularly useful if a structured training program is established.

My most serious comment is that I feel there is a grave danger the press section will deteriorate if it is not more active than it is at this time.

AUDIOVISUAL SECTION (JEMO)

This section is now a service with its facilities available to the Department of Education. It is fairly well equipped, but it seems to place emphasis on projected materials. There are few places outside Kathmandu (and not many in Kathmandu) that can use projected materials. I was interested that not more effort has been placed on the preparation and production of nonprojected audiovisual materials. However, I have only a limited experience in audiovisual programs, and so I can make no significant recommendations or comments.

DISTRIBUTION OF PRIMARY TEXTBOOKS

Before 1968 texts published by JEMO were shipped to the District Education officers for distribution. I have no reliable information on the practicality of this method, but it is probable that the DEOs could not handle the accounting and warehousing and sale of the books effectively. It must be recognized that the

distribution of texts in Nepal is perhaps more difficult than in any other country in the Near East or South Asia.

In December of 1967 the Government of Nepal gave a four-year contract to Sajha Prakashan to distribute JEMO books. I do not know the details of this contract; however, I believe that the books are delivered by JEMO to Sajha's warehouse in Kathmandu. Sajha Prakashan then delivers stock to its branch offices in Bhadrapur, Biratnagar, Pokhara, Bhairahawa, Nepalgunj, and ~~B~~argunj. These branch offices are responsible for selecting, and selling to, agents (usually bookstalls) in each district except those in the remote areas. (In the remote areas--approximately 18 districts in the mountainous part of the nation along the Tibetan border--books are distributed free with transportation costs paid by the Remote Areas Commission.)

Sajha Prakashan is paid 35 percent commission. This firm informed me that it receives books on consignment and is paid a commission only on books sold. It reports it pays to the JEMO account each quarter. (There is a large discrepancy between JEMO's records of payments due and those of Sajha Prakashan, possibly because of a difference of opinion on whether the books are on consignment or straight sale; however, I did not go into this matter for it lay outside the scope of my survey.) Sajha pays its agents a commission ranging from 10 percent to 30 percent, and this scale is determined by the costs of transportation incurred by the agents, for the agents pay transportation costs from the branch offices.

Sajha also sells the publications of other publishers, sometimes on an exclusive arrangement, and it does some publishing on its own (though I was told by its manager that it does not publish textbooks). It offers higher discounts to agents on the books of some other publishers than it does on JEMO books, and I was told that this was because other publishers provided larger discounts to Sajha

Prakashan.

The distribution of texts is a key operation in the JEMO program. Books may be written and they may be published, but if they do not reach the hands of the students they are ineffectual. The difficulties of distribution cannot be overstated in Nepal. There are few roads, no railroads, and the major means of the transport of goods is on the backs of coolies.

GENERAL COMMENTS

Usually a textbook publishing house has the function of acquiring or originating a manuscript, editing it, preparing it for the press, contracting for its manufacture (if it does not have its own printing establishment), and selling it in the educational market. In many respects, JEMO can be considered a textbook publishing house, but with broader responsibilities. It not only originates a manuscript but develops it closely under the guidance of a curriculum and syllabus. This coordination of the text with the curriculum is an essential part of JEMO's functions. It is also responsible for the appropriate testing and evaluation of the textbook. In other respects it is quite similar to a publishing house, for it prepares the textbook for the press (in terms of editing, design, and layout), and it supervises the manufacture of the text. (It does this in its own press section, but it could also do it in other government or private presses.) It then contracts with a distributor to sell the texts in the educational market.

As a publisher, JEMO has the additional responsibility of producing quality textbooks and acting as a leader in encouraging a general improvement in all publishing in Nepal.

At this time the writing of texts is based on the talents and availability of the writing staff at JEMO. It is probable that in time this program will

develop to where these writers are subject specialists and editors who will draw on the best and most knowledgeable writers throughout Nepal to submit manuscripts for use in the schools. Such manuscripts will go through the hands of the editors and under their guidance the nonstaff writers would write texts that meet the requirements of the curricula and the evaluation committees. The Nepali staff writers, however, have not yet attained the expertise to be such subject specialists and editors; however, if American subject specialists were available to work with them, steps could be taken to develop them within the reasonable future. Having one writer for each subject, as at present, does not produce the best texts possible for Nepal. The ideal would be to have a subject specialist as an editor who would be dedicated to getting the best writing for the texts in his field.

I understand that JEMO no longer plans to use color in its early readers, and yet it is the color that excites the new reader, many of whom may never have seen a book before their first textbook. I mentioned this to the Director General, and his response seemed to concur with my feeling that color is of value. Using color on alternate signatures or even on one side of alternate signatures would add only a paise or two to the costs of manufacturing.

The production control at JEMO is inadequate. By "production control" I mean the scheduling of the manuscript from its initial stages through its preparation for the press. At that time, the press section is responsible for the scheduling of the textbook, and this schedule is reported to the production control of JEMO. If the press section cannot meet a reasonable schedule, then production control might find it necessary to use another press. Production control also is responsible for coordinating the writing, illustrating, editing, routing of proofs back and forth between the press and the authors, and the appropriate design

of the textbook. The lack of appropriate production in JEMO suggests that JEMO has the structure of an educational publishing house but with isolated and unrelated units. The production section is basic to the coordination of all these units so that a manuscript is produced efficiently and with high quality. I observed that the artists are unaware of how their art is used in reproduction, and I was told by the offset camera personnel that the artists had not visited them to see the technical techniques used in making plates of their art (this would require only that an artist walk from one wing of the JEMO building to another). Schedules are not followed (or even set) and there is no provision to keep the press and personnel busy. Designers are not alert to the requirements of the printing presses, and they do not ask the press section for binding layouts or whether to paste up camera copy for 4-, 8-, 16-, or 32-page signatures.

The press section is completely underused. As a result there is low morale. It is a good facility, but unused people and unused machinery rust.

The administrative section is more concerned with its clerical duties than with giving true administrative services and support. Although it handles purchasing, it makes no serious budgeting efforts in trying to anticipate maintenance and replacement requirements. Without a cost accounting procedure, it is not certain of the true costs of the whole effort. It assumes its only responsibility is to keep records and not to interpret them for its management. Although it is also responsible for personnel, it conducts no orientation courses and has no formalized training programs.

In my survey I have found considerable dissatisfaction with the distribution efforts of Sajha Prakashan. Both Nepali and Americans have expressed this concern. Certainly a careful study need be made of the present method of distribution, but I do not advise a too hasty rejection of the use of a commercial wholesaler,

whether it be Sajha Prakashan or some other dealer. DEOs are not equipped to distribute books, especially when they must be purchased by students; nor are DEOs especially capable in distributing free texts, for they are inexperienced in the handling of large quantities of books and become fearful of their accountability of such books. (In the free textbook areas, it would seem more appropriate to have central zone warehouses with districts able to draw upon these from term to term, acquiring only those materials immediately needed.)

It does not appear, either, economically sound for JEMO to establish its own branch offices and to enter into a sales program with agents. This type of program would require large investments and staffing and would likely be no more efficient than commercial wholesalers. Commercial wholesalers, at least as long as texts are sold to students, can operate more economically for they will be covering their overhead costs with the sales of the books of more than one publisher.

It is true that the Sajha Prakashan contract should be carefully reviewed-- or any contract given to another wholesaler. I suggest that the rate of commission should be of secondary concern, however. The important considerations should be given to the services provided by the wholesaler.

1. What branch offices can he provide and what is their geographical location?
2. Do his branch salesmen actually travel to agents to sell books?
3. Do they deliver books promptly?
4. Do they maintain adequate stocks?
5. Are the agents located strategically to service the largest number of schools?
6. Do they have adequate warehousing to protect the books?

It is even possible that larger commissions should be granted the wholesaler so that greater services can be provided. It is probable transportation costs should be paid by the wholesaler to the agent so that the agent can make some profit from the sales of books. The distribution of books is made not for the return that can be made to the government but for the sole purpose of getting the books to the students.

In addition, a continuing study of distribution methods should be undertaken by distribution specialists. This study might well consider looking at how goods reach villages rather than looking at the villages and towns from the vantage point of Kathmandu. It might be found that the cloth or tinware merchants, for example, have better distribution systems than booksellers, and we should encourage booksellers to consider new methods of distribution. In the United States and in Europe we have long found that drug stores, supermarkets, and nonbookstores can sell books as well as bookstores. In most towns in the United States and Canada, for instance, there are no bookstores as such.

We must also consider whether or not JEMO books should be compulsory. There is the advantage that JEMO books are designed to fit the curricula and teachers are being trained in the use of these textbooks. This would relieve schools of the pressures to use other texts, but it would also mean that JEMO texts must be well distributed enough so that they would be available. (Note: There was some question as to whether or not the GON could make the books compulsory because of the semiautonomy of the district schools; however, the Director General informed me that the books would likely be made compulsory and HMG had the power to do so.) The disadvantage of compulsory texts is that without competition the JEMO books might become mediocre. It is possible that making JEMO books compulsory for a

period of time (following which other publishers' texts must meet minimum standards) would work out. My hope in maintaining high standards in JEMO texts is based more on the recruitment of outstanding writers from all of Nepal than in the spur that competition from other publishers might give.

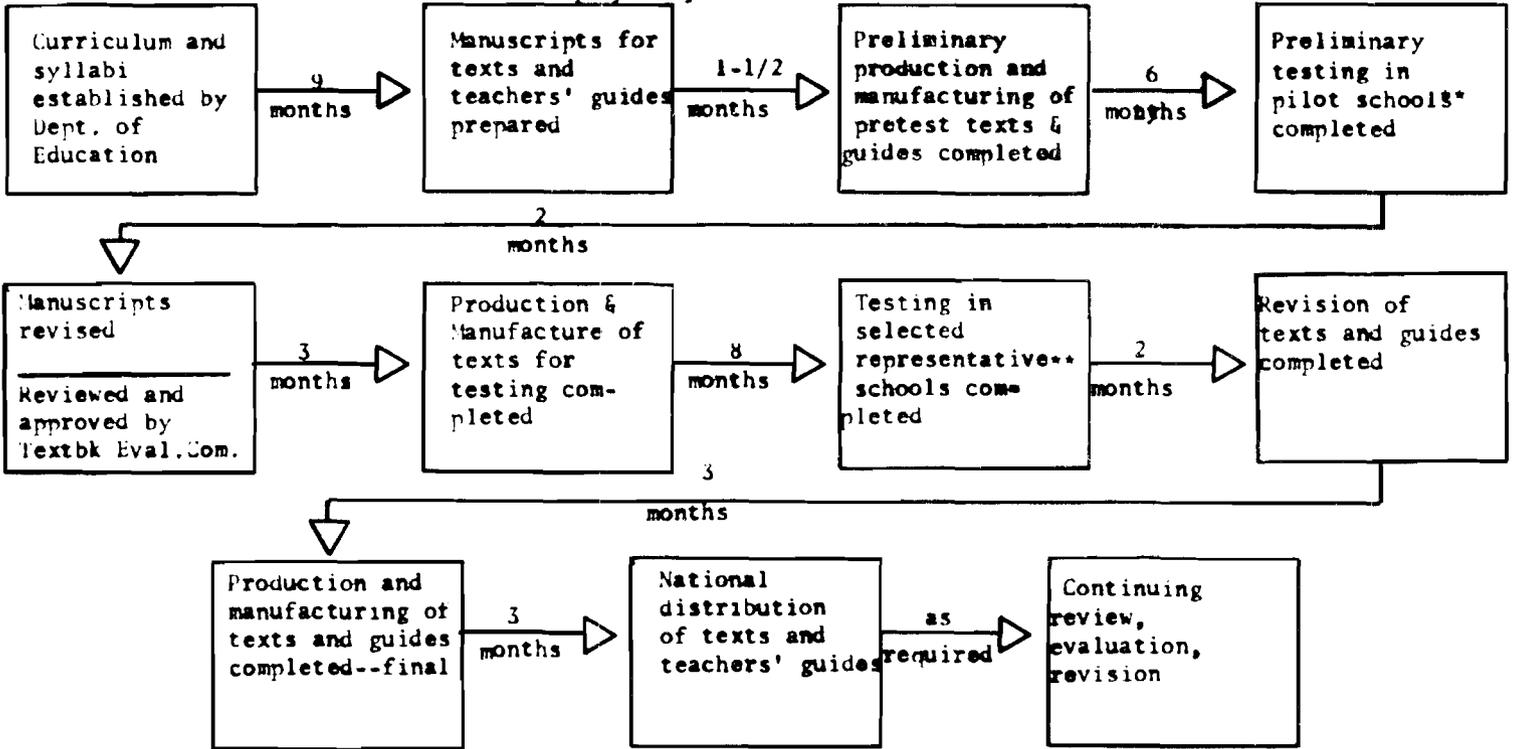
RECOMMENDATIONS

These recommendations and suggestions are limited to the JEMO program. USAID's direct assistance to the Educational Materials project is not of great significance at this time; however, the project warrants additional assistance as may be required to assure that the curricula are appropriately translated into an effective textbook and materials program. This aid would seem to require assistance in the preparation of effective texts and teachers' guides and in alleviating the problems that obstruct the effective distribution of textbooks and other materials to the schools of Nepal.

1. There is a very reasonable desire on the part of both Nepali and Americans to produce materials that will have an immediate appearance in the schools. However, as the model illustrated on the following page indicates, it may take as much as three years for a text to be prepared, produced, tested, evaluated, and reach the nation's schools. The time schedule suggested in this model is, of course, arbitrary, and will not be true for all texts; however, it does indicate that if the intent is primarily for production itself, the publishing of textbooks can be done quite swiftly. If the intent is to provide texts that are meaningful to the students and will assist in educating them, time is required for writing, testing, retesting, evaluating, and thoughtful publication. I recognize and admire the zeal of the Nepali and Americans in USAID to see immediate

SUGGESTED TIMETABLE FOR TEXTBOOK PROGRAM
(Based on typical 128-page text)

(3 years)



*Pilot schools are those accessible for observation by writers of use of texts and whose teachers are well trained and capable of using guides well. There need not be many pilot schools, but the materials tested must be legible and with good illustrations and art.

**Test schools should be selected to include both town and village schools and should be representative of the use of texts under all teaching and environmental conditions. The texts for the test schools should be in as final a form of production as possible.

results; however, as I looked at Nepal, I also realized that it could be twenty years or more before these texts could effectively reach throughout the land. The texts now being prepared will in almost all instances have to be redone very shortly because of the lack of adequate testing, rewriting, retesting, and careful coordination with the total curricula.

I recommend, therefore, a replanning of the calendar of operations for JEMO to provide for all elements of textbook production, as shown in the abbreviated chart. I suggest pilot schools be selected, and that test schools be selected annually (so that more teachers and students will not only become familiar with the new texts but also become more aware of the concern of His Majesty's Government in their education). The model shown in the chart shows only arbitrary time units; these must be flexible, for some texts will vary in their time requirements.

2. The use of writers at JEMO is self-limiting. The writers are paid salaries as government employees and have many interruptions in their work because of absences on other government business or because they must handle administrative, editorial, or technical details without adequate support. I recommend that associate or assistant writers be assigned to assure continuity of the program in each subject.

In 1972, when all primary texts are scheduled for publication, an effort will be made to produce texts in secondary subjects. I suggest that JEMO at that time seriously consider developing its writers into senior or associate editors. This development would allow JEMO to encourage, and contract with, the best authorities in subject matter to write and/or with the expert guidance of the JEMO editors--to produce excellent texts suited to the curricula, the needs of the

students, and with the authority that such writers could represent.

Even now additional assistance for the writers in JEMO would allow them to coordinate closely the work of the curricula committees with the needs of the schools themselves. With this freedom from a heavy writing schedule, each writer could work directly with teachers on the teachers' guides and they could observe directly the use of their texts in classes. It would allow them to escape from their current isolation.

The writers do not have access to current methodology in textbook approaches. The library at JEMO is inadequate, and the advances in more education have been tremendous. I recommend, therefore, that subject specialists be made available by USAID to work with these writers. These subject specialists would work as colleagues (not as "advisors") to suggest new teaching attitudes, methods, and illustrative examples. They would also, in conjunction with the writers coordinate their efforts with the curricula committees and observe the use of materials in the schools.

I suggest that such subject specialists, provided by USAID, would work on a man-to-man basis with the writers. This would eliminate the need for a writer-editor specialist, now provided by USAID. Such subject specialists would be resource personnel and would be drawn upon as the writers need them.

3. Present testing procedures are so informal as to be almost useless. A text requires careful and thorough testing in pilot schools where the writers (and the subject specialists) can observe student reaction and participation in the learning processes. Such pilot schools require trained teachers who have been indoctrinated in the use of the texts through study of the teachers' guide. If the writer be a teacher, he could even teach large sections of his text.

I recommend the restudy of the present testing methods and a formal program for such testing. (Refer again to the chart entitled "Suggested Timetable for Text-book Production.")

4. Evaluation is always required for textbooks. Unfortunately, some texts are now being reprinted again and again without even typographical errors being corrected. This, however, is not as serious as the reprinting of texts with technically unsound materials. I recommend that a procedure be established to provide feedback from the schools on each text. Such evaluation may require personal interviews by the writers, or it may be enough to have questionnaires completed by the teachers. Whatever the method, it must be remembered that textbook publishing is a continuing effort, year after year, with the aim that each succeeding edition or reprint be a little better than its predecessor.

5. There is need for trained personnel in certain areas. Some of this training can be obtained by sending participants to America or other countries, by in-house training courses, or by training in a Nepali center. In some instances improving the pay scale may attract competent people.

Graphic artists. There are none at JEMO. The staff artists are not familiar with the mechanical requirements of design, screens, platemaking, reductions, camera copy, etc. This lack of graphics knowledge frustrates them in their efforts and increases the work of the press section. It also significantly lowers the quality of the textbooks. Those artists now at JEMO can be taught. There is a trainee returning from the United States soon, but he will not have time to train his colleagues. More artists--perhaps two--should be sent to Iran or India for special training.

Distribution specialists. There are two book expeditors now on the USAID staff, and there is a warehouse and distribution chief on the JEMO staff.

None of these is skilled in distribution methods. Textbook distribution in Nepal has its unique problems, but distributors in Nepal need to be aware of new methods. Distribution must use every channel possible, and many in combination. People are needed who will concern themselves in depth with exploring new approaches and methods or rediscovering old ones. There are no special courses for distribution; however, there are good distributors in America, India, Japan, and England, and their methods should be studied by a Nepali. I recommend such training for at least one intelligent Nepali who understands the real difficulties of transportation and communication in Nepal.

Proofreaders. There is an immediate need for proofreaders. This is a fairly new skill in Nepal and there are few trained proofreaders available. It may be necessary to establish a training program at JEMO (where constant proofing is required. Perhaps the trainees could also be sent to India. Proofreading, however, is such an underrated job in Nepal, and the salary scale is so modest, that an entire review of the position is required. An expert proofreader must know language, spelling, syntax, references, and have a smattering of many disciplines. He must know when to correct typographical errors and when to query authors on the sense of their sentences. Lack of proofreaders at JEMO is costly, for writers must be diverted from their tasks to do their own.

Typists. There is need for skilled typists at JEMO. Apparently this can be corrected by reviewing the pay scale for typists there. I recommend that this be done at once. Again, there is a high cost in diverting writers from their work because they must oversee all typing and proofread each line.

6. The press section at JEMO has a greater capacity than is apparently required for JEMO's scheduled work. Equipment of this nature must be fully used to be economical, and so it is important that the press receive work from other

parts of the Department of Education, the Ministry, or the GON. A study should be made as to whether the press should remain solely for JEMO texts (which would be inefficient at the present level of operations), be a Department press, or become part of the Government Printing Office. Priority, of course, should continue to be given the production of JEMO textbooks, regardless of the decision made on the status of the press.

The press section needs more staffing for its business management area. It requires cost accounting, scheduling, control of work flow, and other management methods. Without these it cannot know how efficient it is nor can it determine its future needs as it becomes more active.

7. JEMO needs a business management section, and its present administrative section should be filling this function. Currently the Acting Chief Administrator also acts as the business manager, and this places a heavy burden on him in addition to his other duties. The accountants report directly to him as does the warehouse. All administrative support services should be under a business manager reporting to the Chief Administrator. There is no need to change the present organization of JEMO to effect this; there need only be a redefinition and assignment of appropriate duties to the administrative section chief.

There is an immediate need for the appointment of a Chief Administrator, for the authority of the Acting Chief Administrator in managing an effective organization is diluted.

8. Appendix A lists personnel required for AID support of this continuing activity. This list includes assignment of subject specialists and the assignment of a production specialist.

The subject specialists (see Recommendation 2 above) would act as resource people for the writers (editors) to provide broader access to modern

methodology and for general support in the preparation of texts and teachers' guides.

The production specialist would be a person with a broad experience in all phases of book publishing, book manufacturing, and book distribution. He would be available to the Chief Administrator for assistance in programming, projection of work loads, and analyses of management requirements. He would also be capable of working on an operational level to train artists and designers in graphic arts. The Chief of the production section would also call on him for special training efforts and for counsel in the coordination of manuscript preparation, production of test materials, and quality control of the textbook program.

APPENDIX A

Additional Personnel Required from AID

Subject specialists: (7)

Crafts
Social Science
Language Arts
English (2nd language)
Mathematics
Science
Home Science

Production specialist: (1)

Additional Personnel Required from HMG

Writers: 7 Associate writers
7 Assistant writers

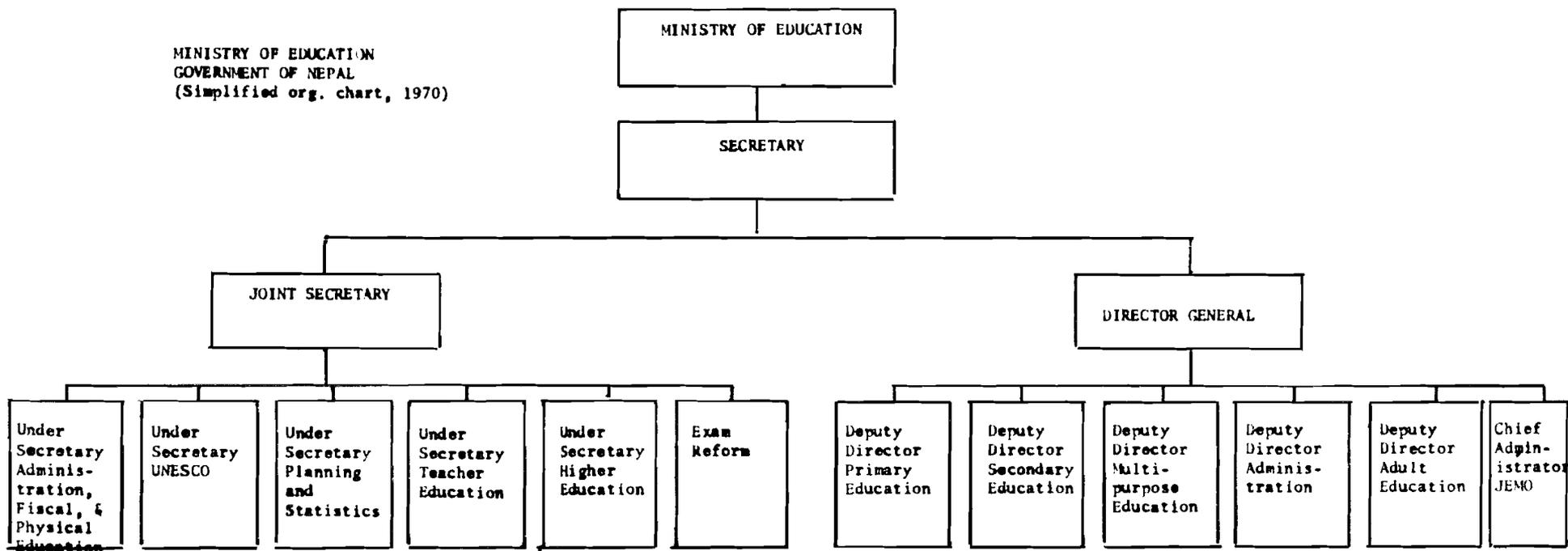
Artists: 3 graphic artists (present artists can be trained)

Designers: 2 design and layout men (can be trained by production specialist provided by AID)

Management: 1 Business Manager (Position of Administrative Section Chief can be redefined and expanded in its responsibilities)
Note: AID may wish to consider a participant course in business management for this position.

APPENDIX B

MINISTRY OF EDUCATION
GOVERNMENT OF NEPAL
(Simplified org. chart, 1970)



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