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 This first interim report on the case study of the Korean Educational Development Institute (KEDI) discusses the Institute, describes the analytical case study of that organization, and details two of KEDI's major projects. The function of KEDI is to undertake comprehensive and systematic reform programs for the schools in Korea, and it is responsible for formal and non-formal educational programs, teacher education, industrial arts and vocational education, population education, and national assessment of student achievement. The origins, mission, roles, operations, human resources, and external relationships of KEDI are described. A time base line data upon which to build is given. The report also looks at KEDI as an institution and examines its role legitimacy and its capacity to meet its objectives. The purpose of the study is to document KEDI's early development, analyze its first two years of planning and operation, continue the assessment of its progress, and provide feedback to administration and staff. The elementary-middle school educational development project, designed to introduce more effective programs, is discussed according to its origins, purposes, implementation, in-service education, evaluation, and recommendations. The study also examines the educational broadcasting via radio and television established by KEDI. The report discusses the continued need for linkages with other institutions and agencies and for a more rational method of financing dissemination activities. This case study, which includes a design and research

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component, may have implications for other nations concerned with educational reform programs.

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FIRST INTERIM REPORT

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ANALYTICAL CASE STUDY

of the

KOREAN EDUCATIONAL DEVELOPMENT INSTITUTE

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The Analytical Case Study of the Korean Educational Development Institute is being conducted by the American Association of Colleges for Teacher Education in cooperation with the University of Pittsburgh under the terms of a Basic Ordering Agreement with the United States Agency for International Development (AID/ta-BOA-1084, T.A. #6)

1976

This First Interim Report: An Analytical Case Study of the Korean Educational Development Institute is the first in a series of reports to be issued during the period July, 1975 - August, 1978. The report has been prepared cooperatively by the members of the study team and has been reviewed by consultants to the team. However, responsibility for the final form and substance of the report is that of the team leader who has served as editor.

Paul H. Masoner

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## I. THE ANALYTICAL CASE STUDY

### A. INTRODUCTION

#### Korean Educational Development Institute

The Korean Educational Development Institute (KEDI), founded in 1972 by the Ministry of Education as its external research component, is an independent, autonomous, and government-funded educational research and development center. Early in 1973 the Institute was authorized by law (the Korean Educational Development Institute Act) as a special juridical foundation. The primary mission of KEDI is "to undertake comprehensive and systematic reform programs for the schools in Korea."

A major responsibility undertaken by KEDI is the Elementary-Middle School Development Project, designed to introduce into the elementary and middle schools of the nation more efficient, more effective, and higher quality educational programs. Other responsibilities of KEDI include formal and non-formal educational programs that will utilize broadcasting and correspondence study, a five-year educational development plan for the nation, teacher education, industrial arts - vocational education, population education, and national assessment of student achievement.

Of considerable significance is the fact that in a period of approximately two years KEDI has become a major force for educational change and has developed a mechanism and a thrust that has high potential for a comprehensive reform of education and for a

continuing process of development and improvement. It is not surprising, in the face of the tasks to be undertaken and the remarkable accomplishments already attained, that KEDI expressed an interest in an analytical case study to be made by an external professional group that would serve to document the origins and early development of KEDI, that would carefully review and analyze the planning and operations of the first two years, and that would over a period of three years continue such study and analysis as well as an assessment of progress, working closely with KEDI administration and staff, providing continuous feedback, and becoming a partner in the comprehensive effort to improve education in Korea. There was firm belief that the ultimate report from the study would be useful to KEDI in its continuing efforts to improve education in Korea and at the same time would be an important means of disseminating information concerning KEDI and its work that would be helpful to other nations concerned with educational reform programs.

#### The Analytical Case Study

At the request of USAID/KOREA the present project director engaged in preliminary discussions concerning this undertaking with KEDI administration and USAID staff in Korea in August of 1974. In November of the same year he participated in the International Conference on Korean Educational Development Project and gained much additional insight into the nature of KEDI and the comprehensive educational reform programs in which it is involved. At that time an invitation was extended to him jointly by KEDI and USAID/KOREA to become involved in the proposed analytical case study and to serve as team leader. The invitation to participate in this most important and challenging project was accepted.

In December and January of 1975 discussions and negotiations were held with AID/Washington concerning the development of a contract to carry out the analytical case study. It was agreed that two separate contracts would be negotiated, the first for a Preliminary Planning Phase and the second for an Operational Phase.

A contract for the Development of Study Team (Preliminary Planning Phase) was executed. The contract listed the following objective:

The Contractor will assist in developing the scope of work for the Study Team, including the selection of team members, who will undertake the Korean Educational Development Institute (KEDI) Analytical Case History.

In addition, the contract defined the scope of work as follows:

The Contractor will perform the following:

1. Review the qualifications and evaluate potential candidates for team membership, to include the preparation of CVs for KEDI and USAID consideration.
2. Develop the scope of work for the study as outlined in TOAID A-036 dated 4/4/74. This shall be accomplished in Korea in March 1975 and it is anticipated to require three weeks in Korea.
3. Secure KEDI and USAID concurrence on nominees.
4. Upon return to AID/W confer with EA/TECH on specific items concerning the actual formation of the team and the timing of the study.

The project director returned to Korea and worked closely with KEDI administration and staff in the development of a design for the analytical case study, in the determination of a possible time frame for the study, in the identification and selection of potential team members and consultants, and in the planning of a strategy for the accomplishment of the total task. At all times there was continued consultation in order to assure general consensus of KEDI, USAID/KOREA, and the contractor on the various aspects of the plan as it was developed.

Important in the accomplishment of the contract requirements and the development of the project design was the opportunity to meet and talk with key administrators and staff of KEDI, to participate in a number of planned visits to schools and other educational institutions, to meet and confer with a number of educational leaders.

The outcome of these cooperative activities in Korea resulted in a plan of operation for the Analytical Case Study which included a statement of the purposes, the basic principles and assumptions underlying the development of the design itself, the time frame for the study, the nature of the study team and consultants, certain operational procedures, an estimate of costs, and a panel of potential team members and consultants that had been reviewed by both KEDI and USAID/KOREA.

#### Purposes of the Analytical Case Study

The analytical case study of KEDI, because of the significant role of the Institute in the development and improvement of education in Korea, is obviously a matter of great interest to many individuals and groups within Korea -- the Ministry of Education; the universities and colleges, especially the schools, colleges, and departments of education; the administrators and teachers in the public and private

schools throughout the country; the educational community generally; and, of course, the public. Further, AID, because of its close relationship with and deep involvement in KEDI, has a very special concern for this study which promises not only to document the development of KEDI and assess its progress but also to provide during the course of the study consultative resources for the continued development of KEDI and its operations. Finally, the international community of educators in both developed and developing nations looks to a careful and detailed documentation of an extraordinary educational effort which may have important implications for all educational reform movements.

The following statement of purposes which undergird the analytical case study is believed to represent the combined concerns of the groups and individuals just identified and at the same time presents a logical basis for the proposed undertaking.

1. To document and analyze systematically the origin, development, and program of KEDI as the major educational research and development operation of Korea.
2. To study the developmental history and effectiveness of KEDI and the progress that it has achieved in relationship to its internal purposes and goals and the educational goals of the nation.
3. To provide, during the period of the study, systematic and continuing reports to KEDI concerning activities, findings, and conclusions of the team and consultants.

4. To develop a model for continuous study and assessment of the continuing efforts for educational reform and improvement by KEDI alone or in cooperation with external groups.
5. To provide a document for developed and developing nations which will describe KEDI as a possible model for those concerned with educational reform and improvement.

## B. THE DESIGN OF THE STUDY

### Basic Requisites and Assumptions

The design, as described later in this section, is the product of close working cooperation involving project director and KEDI administration and staff. In addition, consultation prior to the visit to Korea was held by project director with Dr. Robert Morgan of Florida State University because of his long and deep involvement in educational developments in Korea and in KEDI itself. Other sources of information useful in the development of the design came from the International Conference on Korean Educational Development Project held in November 1974 in which the writer participated. Still other assistance came from KEDI and AID publications.

There are certain basic requisites that appeared essential to the design of the analytical case study. They include:

1. The design must involve and be applicable to all programs and tasks of KEDI that are related to its mission, goals, and objectives.
2. The design, in order to be optimally effective, must involve the participation of both KEDI and AID in its development and must have their approval and endorsement.
3. The design must be subject to continuous review by the team and consultants, by KEDI, and by AID in terms of its efficiency and effectiveness and must be subject to appropriate modification aimed at its improvement.

A number of planning assumptions were developed jointly by the project director and KEDI administration and staff. These assumptions which are listed below provided an important basis for the development of a design for the analytical case study.

1. The primary responsibility for the study will be that of an external professional group of team members and consultants.
2. KEDI administration and staff will have a close and continuous involvement in the study through a variety of cooperative arrangements.
3. KEDI, with its constant concern for measurement and appraisal of its efforts, has essential and basic information at hand that is important to assessment and study by an external agency.
4. KEDI shall be responsible to a considerable degree for providing a wide range of information and data required for team and consultant use, analysis, and interpretation.
5. Team members and consultants, in addition to the development of close working relationships with counterparts in KEDI, shall establish similar modes of cooperation with members of the educational community in Korea.
6. Both the team and consultants and KEDI administration and staff shall work cooperatively in an atmosphere conducive to continuous interchange and feedback.

7. The project shall be characterized by peer-type relationships in which colleagues are working cooperatively for common goals in an atmosphere sensitive to the Korean cultural setting.
8. Prior to completion, team reports, ad hoc, interim, and final, shall be reviewed jointly by the team and KEDI in the interests of accuracy, applicability, and potential usefulness.
9. The ultimate responsibility for all reports shall be that of the team, the consultants, and the team leader.
10. Reports, ad hoc, interim, and final, shall be made available to both KEDI and AID.

### The Case Study Design

On the basis of the planning assumptions stated earlier and through considerable discussions with KEDI administration and staff a model was developed for the analytical case study. The model represented certain modifications in the process used in the United States for the accreditation of higher education institutions. The process of accreditation, perhaps unique to the United States, has become well-established and has gained considerable acceptance as a systematic and valid strategy for evaluating the organization, programs, and outcomes of colleges and universities. Such a strategy, if applied to the analytical case study of KEDI, required some modification to fit the purposes and circumstances of the project. However, with relatively few changes, none of serious or significant consequence, the model did meet the planning assumptions and at the same time had a high relevance to the task and the purpose to be served.

The study model developed for the analytical case study of KEDI included the following procedures:

1. The development of an outline for the study which include all those elements which it is anticipated should appear in the final team report.
2. The selection of an external team and consultants with the knowledge and skills appropriate and relevant to the individual tasks and the total task to be accomplished.

3. The development by the study team and consultants, in cooperation with KEDI, of a systematic study strategy to include indicators which permit measurement and assessment of KEDI programs; standards or criteria to be utilized; nature and methods of data collection; establishment of counterpart relationships; nature and use of conferences with educators, parents, students, civic leaders, and others; observation of educational programs; analyses to be made and methods of analysis; data interpretation; other relevant tasks; and the development of findings, conclusions, and recommendations.
4. Completion by KEDI of a special report prior to the beginning of team and consultant efforts (KEDI Report) based on the outline of the study. This report, which need not be organized formally in accordance with the outline, will consist of a variety of KEDI documents and reports that are already available and that bear on the elements in the study outline. Included may be appropriate KEDI internal evaluative materials, copies of instructional materials, curricula, teaching-learning strategies, and other appropriate materials. This KEDI Report shall be updated from time to time during the period of the study as required.

5. Provision of other information by KEDI relating to the origin of KEDI, national education reform plans, historical information, baseline educational statistics, and other information viewed as relevant by the team of by KEDI.
6. Review, study, and analysis of all available and pertinent data from the KEDI Report, from other KEDI publications, and from other sources by team members and consultants prior to travel to Korea and on a continuing basis while in Korea.
7. Team and consultant visits to Korea in order to accomplish project tasks including the following:
  - a. Establishment of counterpart relationships with KEDI staff and others.
  - b. Continued study and review of all applicable data, instructional materials, instructional television and radio programs.
  - c. Study and review of management systems, evaluation procedures, innovation diffusion, long range educational planning, and other strategies.
  - d. Observation of educational systems and educational projects.
  - e. Interviews and conferences with ministry personnel, teacher educators, teachers and administrators in the schools, school superintendents, school board members, educational leaders, public leaders, students, parents.

- f. Study of data on assessment of achievement and educational improvement.
  - g. Collection of additional information and data from KEDI or from other sources as needed for the study.
  - h. Analysis of findings and development of conclusions and recommendations.
8. Provision on a continuing basis for Team/Consultant -- KEDI interchange of ideas and concerns and for a systematic plan of reporting and feedback.
  9. Continuing study and review in the United States of additional data and documentation by team and consultants during periods between visits to Korea.
  10. Preparation by team and consultants of ad hoc, interim, and final reports in draft form.
  11. Review of such reports by KEDI for identification of factual inaccuracies and inappropriate conclusions or recommendations.
  12. Completion of reports by team and consultants. The final form and content of all reports is the sole responsibility of team, consultants, and team leader.
  13. Delivery of reports to KEDI and AID.
  14. Preparation, if considered desirable, of a report specifically intended for dissemination internationally of the "KEDI Story."

### C. THE PROJECT TIME SCHEDULE

It was believed that the most effective time schedule and one which would permit the most efficient utilization of team members and consultants would be achieved by relating the entire effort to major operations of KEDI, especially those involving the Elementary-Middle School Development Project. A series of small scale tryouts and comprehensive demonstrations of certain significant program developments suggested a calendar of team operation.

The calendar for these tryouts and demonstrations is listed below:

#### Small Scale Tryouts

May 28 - June 23, 1973	Four weeks
November 1 - 30, 1973	Four weeks
October 1 - November 30, 1974	Eight weeks
May 1 - June 30, 1975	Eight weeks

#### Comprehensive Demonstrations

September 1975 - February 1976	Six months
March 1976 - February 1977	Twelve months
March 1977 - February 1978	Twelve months

These tryouts and demonstrations represent critical points in the Elementary-Middle School Development Project. Each yields information and data which is used by KEDI in its study, review, and modification of the instructional system and instructional materials. Each represents a point in time that offers excellent opportunities for assessment and modification of program, program materials, and strategies. The last of the large scale demonstrations is especially crucial since it comes at a time when important decisions must be made concerning dissemination and the installation of the new instructional system on a national scale.

Thus, it was proposed that the analytical case study begin in the fall of 1975 and continue through the summer of 1978. Such a time frame would make it possible for the team and consultants to begin work in the fall of 1975, reviewing all past activities of KEDI including the four small scale tryouts. Team and consultant visits in the following years would also occur in the summer when complete data on each comprehensive demonstration are available for review and study. The final team visit and the final team report would come at the critical time referred to earlier -- after the completion of the last of the comprehensive demonstrations and prior to major decisions relating to future activities of KEDI.

#### D. TEAM AND CONSULTANT REPORTS

It was agreed that reports are to be classified as ad hoc, interim, and final. Ad hoc reports will be relatively brief and informal statements prepared either at the request of KEDI or upon the decision of the team/consultants. Such reports will usually deal with specific and immediate matters of concern. Interim reports, however, are to be completed at the conclusion of each team/consultant visit, be more comprehensive, and will deal with matters which have been the focus of activity and concern during the visit. In addition, certain other types of formal reports of an interim nature may be prepared at the request of KEDI for team/consultant views on particular and specific matters.

The final report is to be prepared during the summer of 1978. As indicated in the design model, this report, as well as others, will be reviewed by KEDI in draft form for appropriate commentary, corrections, and modifications -- all, of course, subject to team acceptance. The final report shall be completed by the team itself.

### E. THE STUDY TEAM AND THE CONSULTANTS

As indicated in the design of the study and the planning assumptions on which the design was based, it was agreed that an external study team and a number of consultants intended to supplement and complement team efforts have the responsibility for undertaking and completing the analytical case study of KEDI. The team was to be composed of a group of highly competent professionals whose commitment to the case study is assumed to extend throughout the entire period of the project. The consultants, also a group of equally competent professionals, on the other hand would normally undertake short term assignments as their services are deemed important to the project. In some instances consultants might serve only for a single assignment; in other cases, consultants might be requested to undertake several assignments during the period of the project.

It was also agreed that the team be composed of seven persons - five from the United States and two from Korea. In the selection of the United States members special attention was to be given to the identification of individuals whose competence as a group included the following:

1. Curriculum and instruction (special emphasis on elementary and middle schools)
2. Management systems (installation and support of instructional processes)
3. Instructional media and technology (emphasis on instructional television and radio)

4. Educational systems evaluation (effectiveness of new instructional and management systems)
5. Teacher education (in-service and pre-service)

Korean members of the team would be recognized authorities/leaders in education in Korea and were to be selected upon the recommendation of KEDI and with the concurrence of USAID/KOREA.

The consultants to the team were intended, as indicated, to both supplement and complement team efforts. In some cases consultants would bring new and additional expertise to the project. In other cases consultants would have competences similar to those already available in the team but needed to complete certain major tasks or to add new dimensions to team thinking. Therefore, it was agreed that arrangements would provide for the appointment of a number of consultants for varying and possibly intermittent periods of time. Special areas to be considered included the following:

1. Instructional materials development
2. Elementary-middle school development and management
3. Curriculum planning and development
4. Instructional television and radio
5. Subject field expertise: mathematics, science, social science, language, music, arts, and others
6. Industrial arts - vocational education
7. Educational planning
8. Finance and cost benefit studies
9. Educational administration

10. Innovation diffusion
11. Non-formal education
12. Evaluation
13. Individualized instruction
14. Radio - television engineering

It was clearly understood that the selection of both team members and consultants would be done in cooperation with KEDI and AID/KOREA and with concurrence on all individuals selected.

The team members and consultants who were involved in the initial study of KEDI in November, 1975, and who were responsible for the preparation of this report included the following:

Team Members

Dr. John O. Bolvin  
Associate Dean and Professor  
of Educational Research  
School of Education  
University of Pittsburgh

Dr. William F. Grady  
Professor and Chairman  
Division of Educational Communications  
College of Education  
Temple University

Dr. Ran Soo Kim  
Professor of Education  
Graduate School of Education  
Yonsei University

Dr. Sang Joo Lee  
Professor  
College of Education  
Seoul National University

Dr. Paul H. Masoner  
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Professor of Education  
School of Education  
University of Pittsburgh

**Dr. Seth J. Spaulding**  
**Professor, International and**  
**Development Education**  
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**University of Pittsburgh**

**Dr. Paul E. Watson**  
**Professor of Education and Co-Director**  
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**Seoul National University**

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**Dean**  
**Graduate School of Public Administration**  
**Seoul National University**

**Dr. Sam P. Wiggins**  
**Professor of Education**  
**College of Education**  
**Cleveland State University**

## F. THE BASIC ORDERING AGREEMENT

Contractual arrangements for the analytical case study were negotiated by the Agency for International Development and the American Association of Colleges for Teacher Education under a Basic Ordering Agreement (AID/ta-BOA-1034).

The agreement stated that the "Contractor will in the course of this study document the development of KEDI, assess its progress and provide consultative resources for the continued development of KEDI and its operations." It was understood that the fulfillment of the contract would involve both AACTE and the University of Pittsburgh staff as well as other consultants as needed including Korean educational specialists.

The period of work covered by the original Task Order extends from June 30, 1975 to March 31, 1977. However, it was understood by all concerned that there would be a modification and extension of the Task Order to August 31, 1978. Such an extension was believed important and necessary in view of the KEDI schedule of operations which called for the completion and evaluation of the third and final large scale demonstration of the new educational program for elementary and middle schools in the early months of 1978. A final team visit in the summer of 1978, it was believed, would make it possible for the team to give careful consideration to the final outcomes of the experimental educational program for elementary and middle schools prior to decisions concerning nationwide implementation of the new program.

## II. THE KOREAN EDUCATIONAL DEVELOPMENT INSTITUTE

### A. INTRODUCTION

This section of the report is concerned with KEDI as an institutional entity on the Korean educational scene. Since this is the first interim report of a study which will cover an extended time period, this section attempts to describe major events and movements to date and to establish base line data upon which to build.

Over the period of the analytic case study, information will be gathered around three rather comprehensive and admittedly overlapping categories:

1. The degree to which KEDI is institutionalized within the total educational effort in Korea--largely a political data category
2. Evidence associated with KEDI's development of role legitimacy--primarily a professional mission and effect data category
3. KEDI's capacity to do what is expected--a data category related to structures, management, and resources.

A detailed outline of what might be termed "criteria of success" categories is stated in appendix K. These criteria should make it possible to focus on KEDI as a total, complex institutional entity on the Korean educational scene and to assess its corporate performance.

## B. ORIGINS OF KEDI

### Florida State University Study

Between 1968 and 1973 a series of events occurred which caused the conceptualization and legal establishment of what is now the Korean Educational Development Institute.

The Long Range Educational Planning Committee recommended that some type of special institution be established which could orchestrate reforms in primary and middle schools. The interest of the Committee and a growing concern over the minimal changes in education since Korea's liberation were instrumental in a USAID decision to fund a study calculated to suggest a reform format. That study, conducted by Florida State University, culminated in a report to which reference will be frequent in this document.\*

The FSU Report, apart from the specificity of its implementation, was extremely important. It presented an external analysis of the then current situation, recommended the establishment of the Korean Educational Development Laboratory (KEDL), and made rather dramatic specific reform suggestions to define the proposed KEDL role and function. It stimulated extensive discussion within government and among professional educators and academics during the months following publication.

The government of Korea initially showed considerable reluctance to establish the new Laboratory. From within the ranks of professional educators came serious opposition. The proposed institution was seen as

\* Referred to hereafter as FSU Report

overlapping existing mechanisms within the Ministry of Education and thus implying criticism of persons and performance as well as threatening status and security. The FSU Report also caused opposition because it was a product of foreign research and authority and because it argued for a technologically driven curriculum and teaching mode. Thus, it could be seen as an intervention into traditional assumptions about education in Korea and as alien experimentation with Korean children.

It is fortunate that the opposition to proposed changes came at that time. It forced the KEDL advocates to argue on several fronts at the same time and to think through ways to interpret their reform ideas and those of the FSU Report to professional groups whose support was critical.

For a period of about 18 months after the distribution of the FSU Report, then, the idea of systematic change in Korean Education and of a new instrumentality to emphasize change were in question.

Top levels of the Ministry of Education and representatives of the Blue House were engaged in tough discussions with KEDL advocates. Dr. Yung Dug Lee was recognized as the central figure representing the need for new mechanisms and approaches. He and a small group of young dedicated educators kept in frequent contact with governmental decision makers and with influential academics.

While the FSU Report was a constant and visible presence in all discussions, there was a conscious effort to use the evidence it presented for need for change more than its specific proposals. Thus, some of the objections born of distrust of foreign intervention were isolated. In reality, there was almost a "starting over" toward conceptualization of KEDL--an acronym by that time already in general usage.

### Development of the KEDI Model

One event of importance was an October, 1971, conference in which participants included several professors from Seoul National University and one from Yonsei University, the directors of the Korean Institute for Research in the Behavioral Sciences and the Central Educational Research Institute and three representatives of USAID/KOREA.

The report of that conference, as well as other unpublished documents of that era, was very critical of the past performance of the Ministry of Education. MOE personnel were characterized as professionally insensitive and resistant to reform. The civil service bureaucracy and attendant salary restrictions were seen as limiting the involvement of a well prepared and creative staff. The conference affirmed and reaffirmed the need for the creation of an organism, free of restrictions seen as inherent in MOE operations, which would assume research and development responsibilities in education. Interestingly, the group also recommended that KEDL perform implementation functions as well.

As "core activities" of a new KEDL, the conference compiled a list which included the following:

1. Identification of specific strengths and weaknesses of the current system
2. Development of a new curriculum
3. Development of an instructional system and materials
4. Conducting of pre-pilot studies and evaluations
5. Carrying out large-scale experimentation and program revisions

6. Orchestrating diffusion of successful programs throughout the system
7. Maintenance of quality levels achieved in experimental programs

Obviously, the basic contentions of the FSU Report found support among those participating in the conference. However, the conference discussions tended to broaden the potential role of KEDL beyond that proposed in the FSU Report. The Florida State study clearly set out a program to reconstruct educational delivery systems at elementary and middle school levels and provided a strong economic rationale for its recommendations. In contrast, the conference deliberations appeared to suggest a need to examine the FSU proposals through indigenous studies and strategy development.

The conference further suggested that KEDL develop a group of activities to support its "core activities." They included:

1. Mobilization of research resources in existing institutes and universities
2. Development of its own staff
3. Training of teachers
4. Involvement of foreign specialists and coordination of their input
5. Reexamination of school and administrative arrangements
6. Dissemination of information

Although the conference participants concluded that KEDL should somehow be connected to the Ministry of Education, many of the recommended activities clearly overlapped responsibilities within the operational arena of bureaus in the MOE. There was support for a KEDL

model at high MOE levels, however, and growing comfort with the idea within the Blue House. Specific statements which might have created direct confrontation between KEDL and specific bureaus in the MOE are not found in KEDL position papers or proposals developed during that period.

#### The Elementary-Middle School Development Project

In November of 1971 came the first official recognition of the incipient KEDL. At that time the Minister of Education authorized Dr. Yung Dug Lee to develop a plan for the Elementary-Middle School Development Project.\* Thus, at the point of specific action, there was a return to the primary proposal of the FSU Report as the focal point of reform.

Quite naturally, the USAID presence in Korea was interested in seeing the FSU Report implemented on some substantial dimension, and Dr. Lee and his colleagues directed their considerable energies toward developing a proposal to earmark a portion of an expected "rice loan" arrangement between the governments of Korea and the United States.

The resultant proposal argued that it was time for qualitative improvement in Korean education and that a comprehensive research and development agency was essential to qualitative change within feasible financial resource parameters. Although entitled "The Korean Elementary-Middle School Educational Development Project--1972-1977," the proposal's statements of purpose and structural descriptions would be appropriate under any one of several other titles. Thus the Project focus was clear but equally clear was the intent to create a permanent agency, one of whose efforts would be the E-M Project.

\* Referred to hereafter as E-M Project

### Establishment of KEDI

The potential of the loan proposal for creation of a new interface between the traditional educational system and change was realized when the National Assembly approved the USAID rice loan and education sector participation in it. That event, on July 31, 1972, was quickly followed by the official registration of the Korean Educational Development Institute as a special foundation on August 30, 1972. Although there was one more legal step to be taken (the enactment and promulgation of the KEDI enforcement decree on October 11, 1973), to all intents and purposes the struggle of creation was over.

The AID loan provided \$7.5 million dollars in support for KEDI, of which \$5 million was in Won and \$2.5 million in dollars, the latter to be used for the purchase of technical assistance, participant training, and equipment. Additional support came through an EXIMBANK-related loan of \$7 million for the purchase of transmitting station equipment.

By the time KEDI became a legal entity, its proponents and its resistors had been through a political-professional process of extreme importance. Its educational professionals had had time to learn to accept as legitimate and respond to a complete range of political, educational, and resource questions. The natural impatience of the educators to get on with needed improvement had to be curbed in the interests of building a solid base of support.

The statements of system inadequacies in the FSU Report had been reiterated. A sense of urgency had been built up and maintained. Issues passed through debate and were restated to live with political realities. The systemic emphases of the FSU Report survived but

implementing strategies were modified. The E-M Project remained as a descriptor of a long-range and broad based programmatic effort utilizing technology. But it was no longer the only thrust to be made nor was it to be the only criterion upon which success judgment would be made. The idea had time to mature along with its idealogues.

KEDI had precedent in Korea. Other ministries had "think-tank" adjuncts. There was, among others, the Korean Development Institute and the Korean Institute of Science and Technology. In addition there was the highly respected research and development institute informally associated with Seoul National University, the Korean Institute for Research in the Behavioral Sciences, which spawned many of these participants in the development and operation of KEDI.

Once the top officials of government, including the then Minister of Education, the Director of Planning, and the special assistant to the President of the Republic of Korea, had agreed that education should be a full participant in Korean development, the precedents could be followed.

KEDI was created as a quasi-autonomous agency of the Ministry of Education. The idea for such an agency started with an unstructured recommendation of the Council for Long Range Education Planning, was reenforced and given structure and purpose in the FSU Report, survived a difficult long-term period of reexamination and definition, and emerged as a legal, functioning reality. KEDI's struggles toward viability then began.

### C. MISSION OF KEDI

The KEDI mission began to take form during the progress of the FSU study. Many of the original assumptions of purpose in the FSU Report reappear in the Project Loan Proposal previously cited. In general, mission and goal statements appearing in more recent KEDI documents remain faithful to earliest conceptualizations.

In this section an effort has been made to discuss mission and goals as they are associated with KEDI as a total entity rather than with its programs. Program-related goals are discussed where appropriate to the substance of other sections of the total report.

Before the recorded specific KEDI mission statements are enumerated, some background for them should be established. The documents on Korean education in general contain a consistent catalog of concern. They note the quantitative demand on education created by the Korean respect for and faith in learning and the imbalance of access to schools between rural and urban locations. They complain of inadequately prepared teachers, regional qualitative differentials, outmoded pedagogy, limited instructional materials and the like. In some quarters, education is seen as producing a heavy drain upon the economy without producing a measurable impact on manpower and economic development.

KEDI was a product of a generalized concern for the quality and impact of education. Presumably, then, it will be expected to find ways to reduce those inadequacies pointed out by so many. KEDI's creation was an important event, carrying with it the varied hopes of a variety of publics. The FSU Report made a strong argument for the

E-M Project on economic as well as educational grounds. USAID is certain to continue to ask questions of cost-effectiveness although, ultimately, it is not the United States which must be satisfied. Korean academics will expect KEDI to produce and implement research findings. Teachers will expect improvement in the environment in which they teach, and parents and students will expect new excitement in schools and greater material evidence of education's utility. That such great expectations may be unreasonable is of little importance. KEDI's visibility, enhanced by its use of radio and television, will remain great.

Too, KEDI was created as a relatively autonomous agency. That means that it is not under civil service constraints in staff employment and can generally behave in independent ways. It has freedoms not enjoyed by regular units of the Ministry of Education. In principle it can attract prestigious scholars, have ready access to counterpart research and development centers around the world, and perhaps even attract substantial external funding. Therefore, pressures for effecting dramatic reforms in the educational system will be further increased.

Of course, KEDI was not designed to control (nor, in all probability, will it ever have power to control) the factors which can assure full implementation of its research and program ideas. In such a circumstance, the KEDI mission must be carefully stated and its general goals must be considerate of what is possible.

A short, comprehensive mission statement did not appear in any of the documents reviewed. However, a mission statement has been deduced from the general purposes stated in the Project Loan Proposal.

### KEDI Purposes

1. To determine educational ideals and objectives which reflect the cultural heritage, social reality, and future direction of the Korean society
2. To reformulate and systematize educational content to correspond to educational objectives
3. To develop and utilize modern educational methods, facilities, and materials to achieve an effective and economically efficient program of education
4. To establish a comprehensive research and development agency to assist the Ministry of Education in formulating educational policy for the nation.

Statements in other documents and those made by officials of KEDI appear to accept 1972 purposes as still current.

The statements of purpose broaden the KEDI arena of activity considerably beyond the E-M Project focus proposed in the FSU Report. It may be argued that any diversion from a highly integrated project-type effort may result in ad hoc response to ad hoc demands and keep the E-M Project from wholehearted implementation. In a setting in which the exercise of control over critical factors is possible, that argument has merit. But apparently KEDI leaders and advisors were sensitive to the dangers of linking KEDI existence completely to the E-M Project even though they were quite aware of the appeal of EMP to decision makers, funding sources, and a growing professional constituency. Greater room to adapt was apparently seen as desirable. KEDI clearly saw its future as a general research and development center and sought to keep its options open for developing increasingly reciprocal relationships with the MOE.

Too, the FSU Report made a strong point of the economic efficacy of the E-M Project and projected a long-term effect upon per pupil costs and percentages of the GNP going to education. KEDI statements of purpose are noticeably less specific in regard to economic impact of KEDI presence.

It appears, then, that purpose statements made at the time of KEDI origins were designed to provide some operational space in which to maneuver and the independence to create Korean responses to Korean problems.

A derived broad mission statement, then, may be stated in the following way: The Korean Educational Development Institute serves the Ministry of Education in the analysis of educational need in Korea and in the invention and trial of effective and efficient programs and structures for the improvement of the educational system.

#### D. MAJOR ROLES AND TASKS OF KEDI

Although KEDI's mission is inclusive within the broad context of research and development in education, its creation was clearly linked to the E-M Project advocated by the FSU report. In order to implement that project and, at the same time, serve in other ways which enhance support and institutionalization concerns, KEDI has made certain interpretations of its mission. Major discussions of program will appear in other sections of this report. A listing of task areas is presented here as well as general comment.

E-M Project. Curriculum and instructional development effort for elementary and middle schools represents the primary role of KEDI at this stage and defines most of its task and functional areas. Within the Project the task areas include:

1. Construction and operation of broadcasting and transmitting facilities
2. Development of instructional materials, compatible with MOE curricula, appropriate to new delivery systems
3. Development of new delivery systems including classroom, media, and management considerations
4. Experimentation and evaluation
5. Training of participating teachers and administrators
6. Development and maintenance of network of contacts at provincial and local levels

Research and Development Activities. At the current stage of development, KEDI's research program is constrained by the need to do basic survey studies as groundwork to KEDI programs. Hopefully, that

situation will change as programs mature and original research will be possible. The following studies have been done or are in progress:

1. Educational Goals
2. New Community Education
3. Teacher Education
4. Industrial Arts, Vocational, and Technical Education
5. Air and Correspondence Education
6. Curriculum Specification
7. National Achievement Assessment
8. Population Education

Some of these projects have been undertaken by KEDI on its own initiative, others at the request of MOE. Some are funded internally by KEDI; others are funded by grants or contracts from outside resources.

Coordination of National Educational Plan Development. At the request of the MOE, KEDI has a key role in the orchestration of a national plan for education. That role assignment appears to be significant in terms of respect for KEDI and confidence in its future. The role was assumed without additional staff or budget, but was wisely seen as being an undertaking in the best interests of KEDI.

National planning in education dates from 1969 but has not been yet formalized as "a plan" within the national political system. The plan document of the Economic Planning Board emphasizes in its Education Sector chapter a manpower orientation in education. It suggests qualitative improvement and the extension of compulsory education, the improvement of teacher education, and a reduction of regional disparities. It further proposes emphasis on vocational training by both public and private sectors.

The Korean Development Institute also points to alleged deficiencies in the educational system and complains about the failure of the system to produce immediately employable technical manpower and about the cost burden on households.

Thus, it is clear that the pressures on the educational system from other sectors will be great. In view of experience in other nations, the tasks heaped upon education by other sectors may be unreasonable and suggested remedies to educational problems may be dysfunctional in the long run.

KEDI has an opportunity and a responsibility to see that the national plan for education shows an awareness of experience in many parts of the world. KEDI may be able not only to influence the policy and strategy statements in plans but also to respond to plan statements as the research and development arm of the MOE, as well.

Publications. KEDI has undertaken a publications program which may become of real importance in the educational development of Korea. Present publications include a newsletter, two research journals, an education journal, research reports, handbooks, manuals, and other monographs and brochures. This growing publishing effort is described in considerable detail elsewhere in this report.

Comment. In any research and development effort in education, adequate funding levels are difficult to maintain. In comparison with research and development efforts in sectors seen as directly associated with economic development interests, education is always a poor relation. KEDI will always feel pressure to supplement its resources. To the extent

that new tasks result in new knowledge in education in Korea, they are certain to serve KEDI purposes. To the extent that new tasks require that KEDI assume operational responsibilities for projects, they require close examination in light of stated missions and goals, potential dislocations in reference to priority efforts, and personnel capabilities of the Institute.

## E. MANAGEMENT AND OPERATIONS

KEDI's relative autonomy, its visibility, and the sense of mission of its key personnel tend to make it a high-pressure environment in which to work. In such situations, administrators need to pay attention to some very delicate relationships among which are:

1. Need for product control and need for personal-professional autonomy of staff
2. Interplay of intrinsic and extrinsic reward systems
3. Performance demands and position security demands
4. Resource realities and system demand for production
5. Political-economic expectations and system capacity to absorb change

The above list does not fully describe the complexities of administering an organization such as KEDI, but it may serve to alert KEDI leaders and others to potential future problems. Little is said in this preliminary interim report about the above-stated relationships. A basis for observation of phenomena related to the relationships is implicit in this report and will be built upon during subsequent field visits.

Formal Organization

Figures I and II show the organization charts applicable from KEDI's official birth through November, 1975. Figure III shows a proposed structure. Constant in the charts is the Board of Trustees.

Board of Trustees. The Board is the policy body for KEDI, and is charged with the review and approval of the following areas:

1. Budget development and implementation
2. General program planning
3. Appointment and dismissal of KEDI officers
4. Property acquisition and disposition
5. Debt assumption and management
6. Changes in Articles of Incorporation
7. Changes in By-Laws
8. Dissolution of the corporation
9. Matters referred to the Board or required by changes in the Articles of Incorporation

Board memberships included, in November, 1975, the following persons:

1. Chairman:

Dr. You Kee Chun, Minister of Education

2. Members:

Mr. Cho Sung Ok, Vice-Minister of Education

Mrs. Lee Sook Jong, National Assemblyman

Mr. Choi Tae Ho, High School Principal

Dr. Lee Hang Yung, President, Hong Ik University

3. Ex-Officio Members:

Mr. Lee Sang Kyoo, Director, Office of  
Planning Management

Dr. Koh Kwang Dug, Director, Science Edu-  
cation Bureau, MOE

Dr. Lee Yung Dug, Director, KEDI

4. Auditors:

Mr. Song Man Yung, Standing Auditor

Mr. Whang Chun Sung, Director, Elementary  
Education Bureau, MOE

Internal Structure. KEDI was organized in 1972 under a three-man directorate--a director and two associate directors with defined realms of authority generally separating programmatic functions from those of management and public relations (See Figure I). In 1975 (See Figure II) the structure was altered to add an office of internal planning and coordination to report to the Director. In addition, one program-related bureau was moved from direct administrative association with other program units and placed under the management unit.

To date, preoccupation with the preparation of physical facilities and start-up requirements for the E-M Project have undoubtedly influenced structural experimentation. In a complex institution like KEDI, required to respond to its own discoveries as well as to the expectations which brought about its establishment, reliance on formal vertical structures is seldom satisfactory. They tend to force attention upon communication and authority lines which may, at any point, be artificial and dysfunctional in programmatic terms. Therefore, it is often necessary to create a horizontal organization with purely program coordination functions.

Normally, such horizontal coordination may best be assigned to a single person whose position is that of advocate for a specific program rather than authoritarian--a staff position instead of a line position.

As a case in point, all bureaus in the structure in effect in November, 1975, performed vital tasks relating to the E-M Project. That project, indeed, is the key effort of KEDI and drives the Institute at the current state of its development. Therefore it is important that the E-M Project receive attention which crosses administrative jurisdictions without prejudice.

Horizontal coordination should be program related and, in any specific case, last only as long as the program itself or until such time as vertical structures can be devised which collect all program functions into one administrative unit. As suggested above, the latter situation is rare in complex educational institutions.

The proposed new structure, shown in Figure III, may alleviate some coordination problems but the interaction between the Department of Broadcasting and Research Department II will continue to require attention, particularly as the two produce E-M Project inputs.

Incidentally, the major administrative unit titles in the proposed structure were changed to "departments" to avoid confusion with Ministry of Education units, organized as "bureaus."

The proposed structure was, in part, brought about by an MOE suggestion that high level administrative staff be reduced. It will require approval by the Board of Trustees and the Minister of Education.

FIGURE I

Organization Chart - Aug. 1972

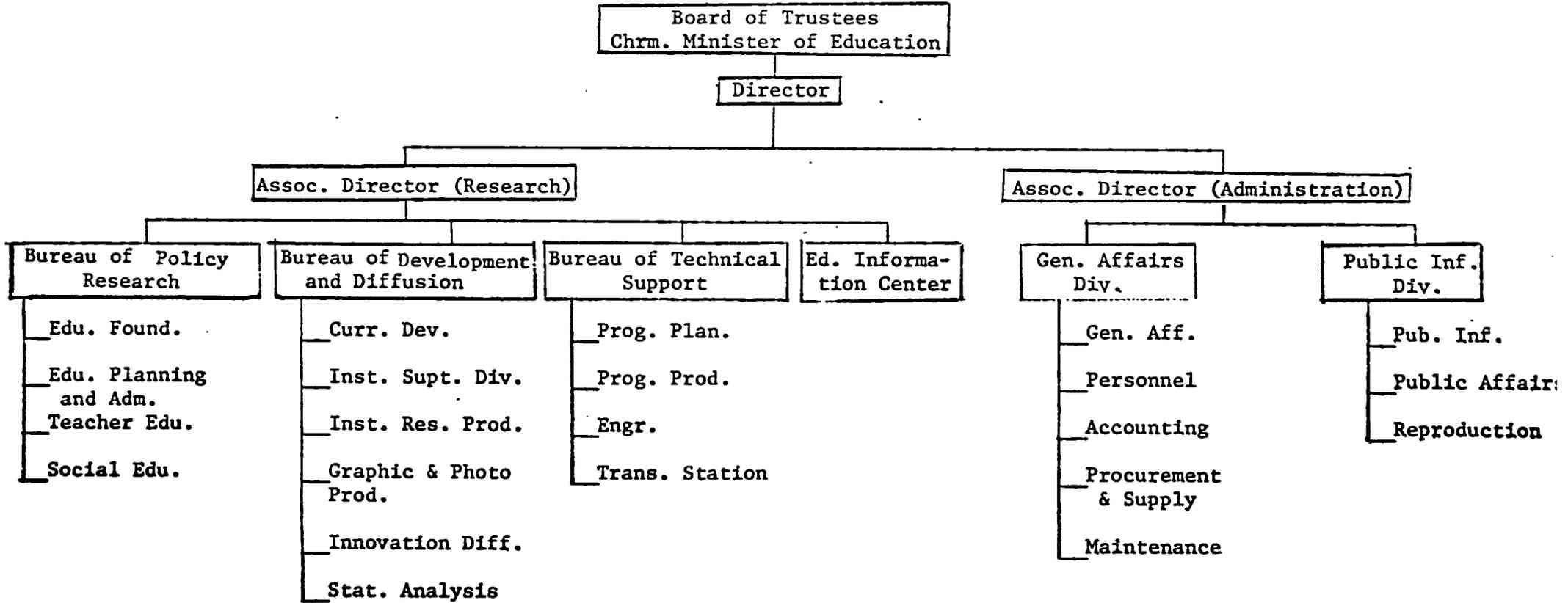


FIGURE II

Organization Chart - November, 1975

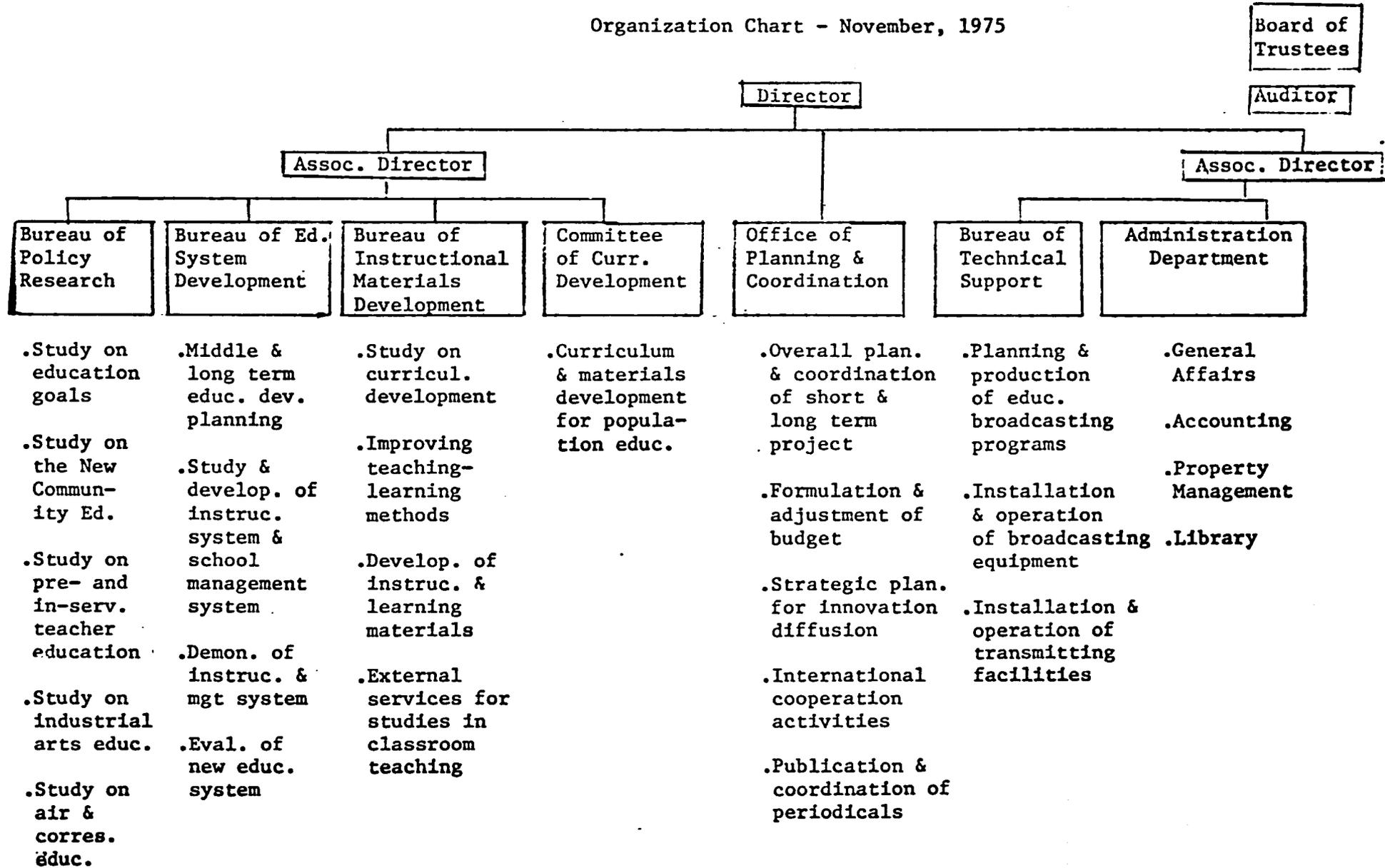
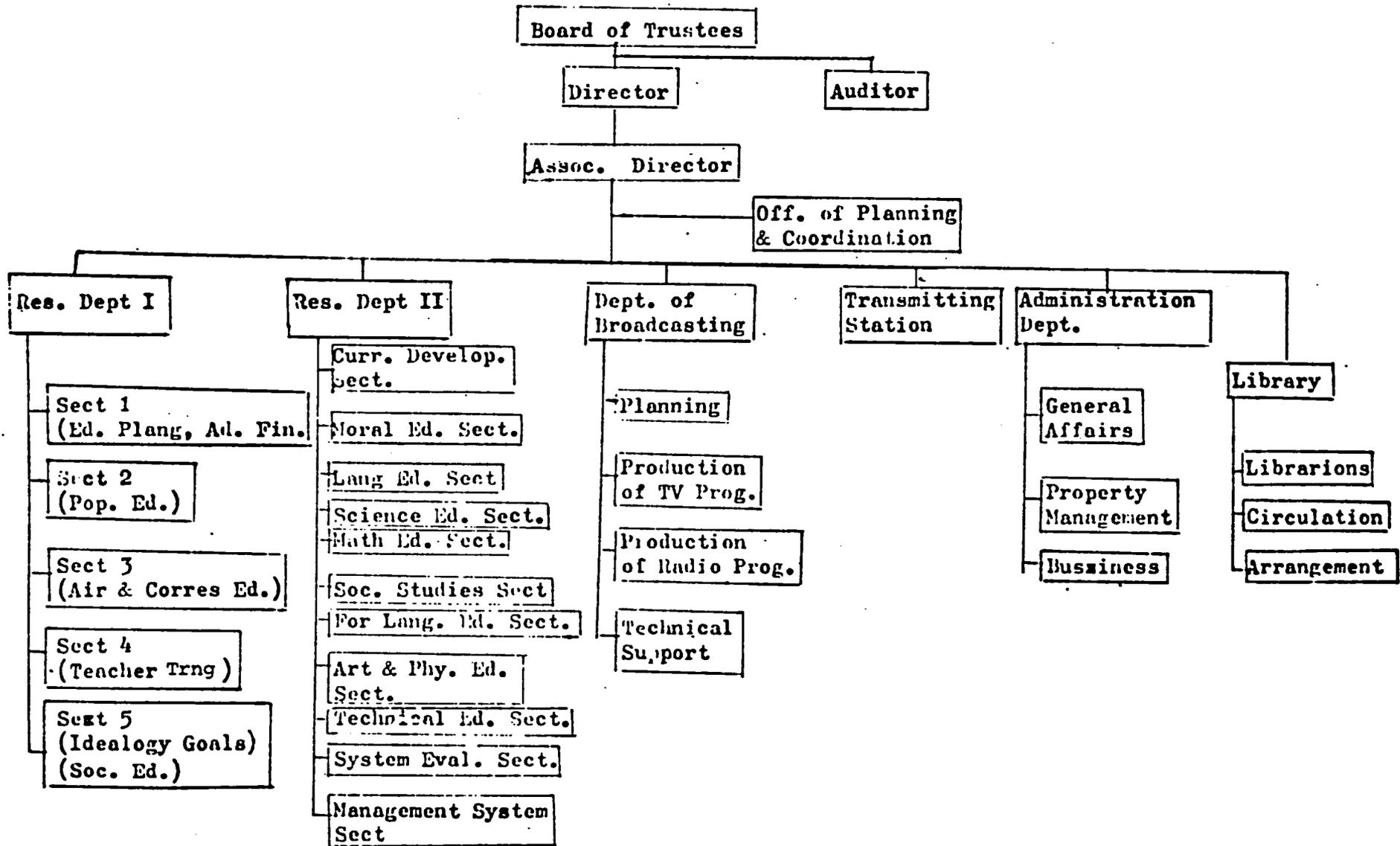


FIGURE III

Organizational Chart (Proposed)

Oct. 16, 1975



Internal Committee Structure. KEDI maintains a series of committees for administrative purposes. They are as follows:

1. Planning Committee - Headed by the chief of Planning and Coordination, the committee drafts project plans for administrative review. Members include key staff to a maximum of fifteen.
2. Broadcasting Advisory Committee - The group provides consultation on technical matters related to completion and operation of the broadcasting station.
3. Publication Committee - Consisting of the top administrators within KEDI, the committee establishes publications policy and serves as editorial board.
4. Coordinating Council - The Council meets weekly to review and coordinate the week's accomplishments as well as to discuss overall operational policy.
5. Task Team Leader's Council - The Associate Director for Research chairs meetings of those bureau chiefs under his direction and their task leaders to assess progress and insure cooperation.
6. Personnel Committee - Made up of administrative personnel, the committee determines internal policy. There is also a Personnel Evaluation Committee, headed by the Associate Director, which is essentially a disciplinary group.

Financial and Budgeting Management. KEDI submits a budget to the MOE in June-July of each year. The budget is prepared in KEDI for each bureau or department. The process is reported to be as follows:

1. Each bureau chief develops, with his staff, a budget
2. Budgets are collected and analyzed in the Office of Planning and Management
3. Modifications are negotiated between bureau chiefs and the Office of Planning and Management
4. An aggregate budget is prepared for administrative review
5. The annual budget is submitted to the Ministry of Education for review by its Director of Planning and Management
6. The budget is submitted to the Economic Planning Board for review (EPB)
7. The budget then goes to the Committee on Education and Culture in the National Assembly
8. Finally, the budget is acted upon by the National Assembly in general session

Although the KEDI budget is at all times visible as a separate item, it is submitted to the National Assembly as a part of the requirements of the Ministry of Education. Thus budgetary review within the Ministry is important because it is at that point that KEDI's place in the MOE priorities is determined.

Direct management of fiscal affairs is vested in the Associate Director for Administration (in the November, 1975, organizational scheme).

Through its Board of Trustees KEDI has negotiated two support loans. The first, resulting from the AID Loan Proposal referred to earlier, made \$7.5 million available to establish KEDI and launch the E-M Project. Recognizing that a project-related loan could not be sensibly spent within a designated time frame KEDI arranged for the creation of a foundation-type fund to be created for \$5 million of that amount. To date, only interest on that fund has been spent for KEDI operations. The remaining \$2.5 million formed the basis for a contract with Florida State University and also permitted financing foreign exchange for the purchase of goods and services in support of the E-M Project.

The AID Loan No. 489-H-084, known as the Rice Loan, made up to \$17 million available to ROKG in foreign exchange commodity costs. That document clearly includes the Education Sector Pilot Project (KEDI's E-M Project) as a recipient of Won generated. It was further defined in a letter from the AID Director to the Minister of Education and the Education Planning Board, dated November 17, 1972. That letter earmarks loan money and proceeds generated by financial actions to KEDI "in the amount required."

AID Loan No. 489-H-085 made available the \$2.5 million as a cash allotment to the Ministry of Education but available to KEDI. Interest as a cash allotment to the Ministry of Education but available to KEDI. Interest is due each six months on the amount expended. Interest rates applicable are two percent for the first ten years, three percent thereafter with the first payment on principal due nine and one-half years after the first interest due date and final payment within forty years.

KEDI estimated that the \$2.5 million would serve to provide broadcasting equipment (\$1,630,000), technical services (\$300,000), publications (\$90,000) and permit the establishment of an emergency fund (\$450,000) and a travel fund (\$30,000).

KEDI then entered into a contract with Florida State University (MOE/FSU Contract #1, dated March 31, 1973) for technical assistance and advising services. The original amount of \$299,987 was increased by amendments (#1, August 12, 1974, to \$397,454 #2, October 25, 1974 to \$627,450). A third amendment did not increase the total amount. The contract, a cost-reimbursable type, called for assistance in technical specification for equipment, graduate level training, short-term consultants, and logistical support.

Although the contract included an FSU field project director, that was found to be unnecessary. Operationally, a fund of \$125,000 is maintained at FSU and is replenished quarterly to reimburse for services provided.

An additional loan credit line was negotiated through the Economic Planning Board for \$7 million to finance the construction and equipment of the transmitting station for KEDI. The aggregate is made up of:

- |  |             |
|--|-------------|
| 1. Western Pennsylvania National Bank credit (EQUI Bank) | \$2,790,000 |
| 2. Export-Import Bank of US credits (EXIM Bank)          | 2,790,000   |
| 3. Exporter Credit (T-Com Corporation)                   | 697,500     |
| 4. Bank of London (LIB)                                  | 722,500     |

Personnel Management. The Personnel Committee is composed of an Associate Director as chairman and not more than five additional members at bureau chief level. The committee is charged with internal policy development, advice to the Director on matters he presents, and selection of staff members for meritorious awards. Decisions require a two-thirds vote of members present.

Appointment of personnel is for one-year terms and selection is made on the basis of publicly advertised competitive examinations. A person's pay grade is arrived at by evaluation of education and experience, including relevant certification and identifiable accomplishment in research. The pay classifications are as follows:

Research Staff	- Grades 1 to 22
Administrative Staff	- Grades 1 to 5 with internal grade steps
Technical Staff	- Same as administrative staff
Broadcasting Staff	- Same as administrative staff
Librarians	- Same as administrative staff
Skilled Workers	- Grades 1 to 25

Personnel with doctorates have the title of Senior Researcher; those with masters degrees are Researchers; and bachelor degree holders are assistant or intern researchers.

Credit toward classification is given for previous experience for research staff only if experience follows a four-year degree. Previous experience may influence classification for administrative personnel only if the experience is related to the assigned KEDI role. There are provisions for pay-grade promotion opportunities during the year for those who have served minimum tenure.

A seven-member Disciplinary Committee serves as a kind of due-process body for KEDI.

Internal Planning and Evaluation. A major responsibility for planning rests in the Office of Planning and Coordination. The chief of this office at present reports to the director of KEDI and is charged with overall planning and coordination of long term and short term projects, with developing plans for innovation diffusion, and for formulating programs in relation to budget resources. Evaluation responsibilities are located in three bureaus. However, major responsibility for the E-M Project has been assigned to the Bureau of Educational Systems Development. Both tasks, planning and evaluation, are discussed in great detail elsewhere in this report.

TABLE IV

## OPERATING EXPENDITURES: OPERATIONAL CATEGORY PERCENTAGES

	1973			1974			1975		
	<u>Direct Costs</u>	<u>Indirect Costs</u>	<u>Total Operating Expenses</u>	<u>Direct Costs</u>	<u>Indirect Costs</u>	<u>Total Operating Expenses</u>	<u>Direct Costs</u>	<u>Indirect Costs</u>	<u>Total Operating Expenses</u>
Policy Studies	12.57		6.41	5.49		2.45	6.28		2.83
Contract Projects	8.53		4.35	13.99		6.24	15.93		7.20
E/M Project	78.90		40.25	80.52		35.94	77.79		35.15
Operations & Management	-	54.07	26.49	-	33.83	18.73	-	19.90	10.91
Debt Service	-	37.31	18.28	-	59.37	32.88	-	75.92	41.62
Misc.	-	8.62	4.22	-	6.80	3.76	-	4.18	2.29
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total Direct Costs	-	-	51.01	-	-	44.63	-	-	45.18
Total Indirect Costs	-	-	48.99	-	-	55.37	-	-	54.82
			100.00			100.00			100.00

Table II data are organized to show expenditures for personnel and other costs by bureau--that is, by formal organizational categories. Table III presents summary data according to programs and categories of expenditure without reference to bureaus. All tables will undergo rigorous examination before and during the next field visit phase of the study to assure that the data are accurate, are accurately interpreted, and form a true base for future analysis.

Some terms are used which may be differently interpreted by different people.

Operating Expenses - Those costs required for the day-to-day operations of an organization, and which exclude costs of buildings and long-life equipment. An amortization plan is normally developed for physical assets and a yearly amortization expense may become an item in operating expenses.

Direct Costs or Expenses - Those costs directly required for program or product delivery without reference to costs of operating the total organization. Examples of such expense are salaries, materials and supplies.

Indirect Costs (Overhead) - Those costs of operating the total organization which services the programs and products but which are not identified by expenditure with programs and products. Examples of indirect costs are libraries, general administration, and utilities.

Debt Service - Interest charges on outstanding debt.

KEDI may not lend itself to certain kinds of budgetary and financial analyses commonly used in the United States. There is, therefore, no intent at this point to be critical of KEDI practices nor to suggest analyses required for good practice. Subsequent discussion is intended to provide a base for meaningful discussions with Korean counterparts and KEDI staff over the course of the study. Together it should be possible to develop a reporting and analytic strategy of real value to KEDI. To that end the following issues are raised. No doubt all the issues are being dealt with in KEDI but it is important to be sure of terminologic understanding.

1. In order to develop clear program budgets and determine real costs of specific program costs, formal organizational departmental units may not adequately serve as primary budgetary units.
2. With experience, an organization may wish to determine an indirect cost rate, a percentage of total indirect costs -applicable to programs or products. In that way, the real programmatic costs are made explicit.
3. KEDI's indirect costs are inflated by an extremely large debt service expense created by massive investment in physical facilities. Although KEDI began to make payments on the EXIMBANK loan in 1975, plans to retire other loans are not explicit.

4. As experience improves and as operating and other expenditures settle into a pattern, close check should be maintained upon the relative amounts expended for personnel.
5. The E-M Project has consistently required and received heavy commitment. The 78 percent of direct costs represents an investment that suggests enforcement of the earlier suggestion that the E-M Project receive horizontal as well as vertical organizational attention.
6. KEDI records show construction costs by year. The relationship between the allocation of physical facility costs to a given year and the loan repayment schedule and interest charges should be clarified and described.

### G. HUMAN RESOURCES

As one would expect, there has been rapid and dramatic increase in the number of persons employed in KEDI since its creation. Table V presents numbers of personnel by position category. As broadcasting becomes operational there may be a shift in the kind of personnel needed--an obvious statement made to suggest that the character of the total staff may change. At the present time, the qualifications of staff tend toward the academic. Appendix A contains the names, preparation, and experience of key staff. Appendix B presents a list of consultants and research professors.

It is clear that, in gross terms, KEDI has attracted to its administration and programs a well and appropriately prepared staff. Their specific relationships to specific roles are discussed in other sections of the report.

A major personnel pool is being created through the KEDI participant training program, primarily associated with the Florida State University contract. Table VI presents data about trainees and training under that program. Eight trainees had not yet returned to Korea by November, 1975. Of those who had returned all but three were working at KEDI and in roles clearly appropriate to their preparation. One person left KEDI to go to a university and another is reported to be unemployed. One person, trained at Florida State and in Japan, is effectively lost to the profession as she is working with a trade corporation utilizing her competence in the English language.

KEDI, over time, will live up to its mission insofar as it can attract and hold the kind of people who can perform the specific tasks required. That capability will be a product of KEDI's competitive position in certain manpower markets.

TABLE V  
TABLE OF ORGANIZATION

<u>Position</u>	<u>Dec.</u> <u>1972</u>	<u>Dec.</u> <u>1973</u>	<u>Dec.</u> <u>1974</u>	<u>Nov.</u> <u>1975</u>	<u>Remarks</u>
Director	1	1	1	1	
Standing Auditor	1	1	1	1	
Deputy/Associate Dir.	2	2	2	2	
Senior Researchers	3	4	6	6	
Research Professors	2	5	11	18	temporary staff
Researcher	16	32	41	54	
Assistant Researchers	-	-	4	2	
Intern Researchers	-	15	5	6	
Materials Developers	-	-	20	16	temporary staff
Technical Staff	3	32	48	46	1975, 22 temporary
Broadcast Staff	-	-	-	27	1975, 4 temporary
Administrative Staff	9	22	28	50	1975, 10 temporary
Librarian	-	-	-	2	
Consultant Committeeman	-	-	-	1	
Skilled Workers	-	-	31	41	1974, 7 temp; 1975, 8 tem
Auxiliary staff	-	-	-	6	all temporary
General Services	-	-	11	10	
<b>Totals</b>	<b>37*</b>	<b>114*</b>	<b>214</b>	<b>289</b>	1975, 78 total temporary

\* Total personnel figures for 1972 and 1973 appearing in the KEDI Annual Report 1972-74, p. 46 do not represent an actual total of columns. Whether one or more items are in error is not known.

KEDI TRAINEES

Name	Title	Current Role	Training	Period of Training	Institution
Park Do Sun	Researcher	Planning	Instructional Design	1973-June 19 - Dec. 21	Florida State Univ.
Byun Yung Ke	Researcher	Curric - Population Ed.	Instructional Design	1973-June 19 - Dec. 21	Florida State Univ.
Hong Sun Jung	Researcher	Teacher Educ.- Syst. Dev.	Instructional Design	1973-June 19 - Dec. 21	Florida State Univ.
Cho Won Ho	Researcher	Inst. Materials	Instructional Design	1973-June 19 - Dec. 21	Florida State Univ.
Kim Dai Hyun	Producer-Director	Production	ETV Production	1973-June 19 - Dec. 21	Florida State Univ.
Kim Jin Sung	Producer-Director	Production	ETV Production	1973-June 19 - Dec. 21	Florida State Univ.
Han Jung Sun	Producer-Director	(1)	ETV Production	1973-June 19 - Dec. 21	Florida State Univ.
Son Hong	Producer-Director	(2)	ETV Production	1973-June 19 - Dec. 21	Florida State Univ.
Kim Yoon Tai	Researcher	Planning	Management Systems	Sept. 1973 - Dec. 1974	Florida State Univ.
Chang Un Hyo	Researcher	Inst. Materials	Instruction & Learning	Sept. 1973 - Dec. 1974	Florida State Univ.
Yoo An Jin	Researcher	Curriculum & Testing	Instruction & Curriculum	Sept. 1973 - Dec. 1974	Florida State Univ.

(1) Left KEDI - Working in Trade Corporation

(2) Left KEDI - Unemployed

Name	Title	Current Role	Training	Period of Training	Institution
Park Jai Mun	Researcher	Inst. Design - Syst. Div.	Instructional Systems	June 1974 - Dec. 1974	Florida State Univ.
Choi Jong Jin	Researcher	Inst. Design Manager	Research School Management	June 1974 - Dec. 1974	Florida State Univ.
Koo Hwak Bong	Researcher	Teacher Educ.	Teacher Educ.	June 1974 - Dec. 1974	Florida State Univ.
Kwak Byong Sun	Researcher	Systems Evaluation	Educ. Technology	June 1974 - Dec. 1974	Florida State Univ.
Oh Jin Suk	Researcher	Inst. Materials (Math)	Math Educ.	Sept. 1974 - Dec. 1974	Florida State Univ.
Han Jong Ha	Researcher		Science Educ.	Sept. 1974 - March 1976	Florida State Univ.
Suh Chung Hwa	Researcher		School Management	Sept. 1974 - August 1976	Florida State Univ.
Kim Dai Hyun	Producer-Director	Production	Radio Program Production	August 1974 - Sept. 1974	Australia
Han Jung Sun	Producer	(1)	ETV Production	May 1974 - Sept. 1974	Japan (NHK)
Kim Jin Sung	Producer	Production	ETV Production	July 1975 - Sept. 1975	Japan (NHK)
Lee Kye Hak	Researcher	(3)	TV Prog. - Adult Educ.	Sept. 1974 - Dec. 1974	Singapore
Lee Yong Soo	Researcher	Production	TV Prog. - Adult Educ.	Sept. 1974 - Dec. 1974	Singapore

(1) Left KEDI - Working in Trade Corporation

(3) Left KEDI - Dong Duk Univ.

Name	Title	Current Role	Training	Period of Training	Institution
Lee Yung Ja	Researcher		Broadcasting	Sept. 1975 - Dec. 1975	West Germany
Ha Sung A	Producer	Production	Broadcasting	Sept. 1975 - Nov. 1975	West Germany.
Chung Tae Bum	Researcher		International- Systems Managem.	Aug. 1975 - Feb. 1976	Florida State Univ.
Park Meon Tae	Researcher		Production	Aug. 1975 - Feb. 1976	Florida State Univ.
Cha Joon Lak	Producer		Production	August 1975 - Feb. 1976	Florida State Univ.
Lee Jeung Kuen	Researcher		Industrial Educ.	Sept. 1975 - Dec. 1976	Ohio State Univ.
Lee Yung Soo	Researcher		Communications Techn. Educ.	Sept. 1975 - Dec. 1976	Indiana University

At this point it is perhaps speculative to discuss particular areas of potential trouble but speculation may serve as an early warning system. In those positions at top administrative and professional levels, directors and senior research categories, KEDI will compete with prestigious opportunities in universities. Within the Korean setting, university positions are seen as very attractive. Within KEDI professional contributions to programs and related research are constrained by relatively specific program orientation. In a university, an individual may pursue his own particular interests and is required to make few adjustments to his research because of his institutional membership. Until KEDI can afford to encourage pursuit of individual as well as institutional goals, its ability to compete with universities will be limited.

Assistant Researcher, Intern Researcher, and Researcher categories of personnel, as well as general administrative staff classifications, will not present the same problem as groups mentioned above. In these positions KEDI should be as professionally attractive as other work possibilities. However, maintenance of competitive salary levels will be of particular importance. Because KEDI personnel do not have civil service security guarantees enjoyed by direct government employees and those in public universities, the term "competitive salary" probably means "higher salary."

In the technical job classifications, there will almost certainly be increasing pressure for KEDI to maintain competitive capability. The private sector will begin to require more technical personnel in media production, direction, and engineering categories and will always be able to provide higher material rewards. It is probable

that the current developmental state of technical work in KEDI is attractive to many people. How long that will last is an important question. It may be that KEDI will be a major training source for media industries in Korea.

Personnel Issues. The following discussion is an attempt to identify areas for possible policy and action attention. KEDI leadership will be aware of the potential for problems. The purpose here is to state as many issues as possible in order to focus future discussion and action. This section is closely related to the personnel management discussion presented earlier and, to the extent that issues can be clarified and dealt with during the next few months, much of the content of this section will be transferred to the personnel management section in subsequent reports.

1. In November, 1975, there were plans by the ROK Government to improve salaries of civil servants by an average of about 45% for 1976. KEDI personnel, because of its quasi-autonomous status, are not guaranteed similar attention. If KEDI is unable to dramatically increase salaries, it will have lost its competitive edge in relationship to, for example, MOE personnel. KEDI had plans to provide a 20% salary increase and to reduce research staff to release additional money for merit increases of 10% for remaining researchers.
2. It was speculated above that research and administrative supporting staff may have limited opportunity to find more attractive employment than KEDI provides. Even if that is true it will not justify a lack of attention to

their needs. The natural tendency will be to reward those critical to program success. If that is done at the expense of support personnel, much of the corporate effectiveness can be lost. Unless KEDI can find ways to avoid substantial turnover in high-level categories, the more stable supporting eschelons may indeed grow more and more important.

3. National policy against "moonlighting" by public employees and university policies on leaves for professors may limit KEDI access to research professors. KEDI experience in that regard should be specifically monitored.
4. The practice of employing temporary staff for specific roles over specific periods of time allows KEDI to be responsive to its own program needs. It may be useful to extend the practice to research position categories. There will be a tendency to institutionalize roles and reduce the capacity to respond quickly to need.
5. As KEDI matures as an organization, the excitement of being a part of a new force in education may diminish. Ways must be found within the Korean context to maintain a sense of unique purpose among employees.
6. The centrality of KEDI to educational change forces its leaders to be always aware of influences exerted by and on KEDI in an external sense. Although to date leaders appear to show sensitivity to internal communication and decision-participation among top management, they will

need to consider ways to expand internal dialogue.

In principle, when leaders speak only to outsiders, internal alienation occurs.

7. As the contractual arrangements and attendant financial resources for training phase out, new arrangements need to be planned.

## H. EXTERNAL RELATIONSHIPS\*

In view of the significance of KEDI's responsibilities in the reform and improvement of education in Korea, the development of appropriate and effective external relationships becomes an important and continuing task. It is not likely that any organization anywhere can bring about massive innovation and change in a national educational system unless there is a cooperative approach and understanding that involves a wide spectrum of the population. The essential importance of feedback from many clienteles is not likely to occur without the establishment of such relationships. The potential utilization of resources essential to educational improvement is enhanced if those who control the resources are aware and are involved in the change process. Even those who are only remotely interested in and related to education can become allies if they are well-informed.

An inventory of the various groups or populations which have concerns related to any changes in education suggests that there is literally no element of the population of the country that can be neglected. Obviously, close relationships with the ministry of education at all levels are most important since it is here that the authority for the control, modification, and improvement of public and private education rests. A second group that is equally important are those who must assume direct responsibilities for the day to day operation of the schools and for the nature of the educational program. These include boards of education, school system administrators and supervisors, local school principals and supervisors, and the teaching

\* Additional reference is made to external relationships in Chapter V of this report.

staff. However, recognizing that any significant change in the educational program must relate to both pre-service and in-service education, the development of close working relationships and a continuous flow of information with university administrators and faculty is most important, especially with those directly concerned with teacher education. Similar close relationships with administrators and staff of the junior teachers colleges are vital.

Aside from these professional groups are the clients - the students, the parents, the general public. Added to these are civic leaders and members of the government, both legislative and executive. It is here that the real source of power often exists. If changes are to occur and if changes require either approval or funding from governmental bodies, affirmative action is more likely to occur if those involved have been well-informed concerning the proposed educational change, have been kept up-to-date in terms of the outcomes of pilot or demonstration programs, and have been involved at least to the extent that feedback has been sought from them during the period of the development of the new program.

One further approach to external relationships which may be very important and indeed quite useful lies in the international realm. The sponsoring of international conferences related to educational reform and particularly to those aspects of reform in which KEDI is involved may be very important in establishing a credibility to reform efforts not only outside the country but also within its domestic borders.

KEDI and the Government. KEDI administration and staff clearly are aware of the importance and potential payoff of appropriate and effective external relationships. The director and his immediate

administrative associates have been extremely effective in their relationships with both the legislative and executive branches of the government. Constant efforts are being made to acquaint Ministry of Education officials with the work of KEDI, its accomplishments, and its developing goals. Continuing efforts are also made to maintain clear lines of communication and information services with other relevant ministries and government agencies, with the legislature, and particularly with the Blue House.

Seminars and Conferences. Occasional seminars and other types of information programs have been held for administrative staff of the provincial school systems. Training programs for principals, supervisors, and teachers have aided in bringing pertinent information to the rank and file of the public and private schools. Personal visits by KEDI staff members individually and collectively to school board and school superintendent offices have been most useful.

Relationships with the KFEA. Further, it is clear that an excellent cooperative relationship has been established with the Korean Federation of Education Associations. The Federation, which has as its constituent members virtually all of the teachers of Korea, looks upon KEDI as a major partner in its own efforts for the improvement of education and educational services in Korea. KFEA views its goals and those of KEDI as quite similar and is interested in developing the present close relationship into an even closer one in which there is must joint planning and action on behalf of education. KFEA is much concerned about the improvement of the quality of teaching and is interested in a close cooperative working relationship with KEDI in such an effort.

Teacher Education Institutions. There also has been some effort, though limited by time and resources, on the part of KEDI to work closely with universities and junior teachers colleges. Obviously, since a major reform of education will also envision a reform in teacher education, it is important that both KEDI and teacher educators work together in such planning as early as is possible. To date such efforts have been primarily through the development of personal relationships with individual members and leaders of teacher education, both in the universities and in the teachers colleges. In addition, through the National Society for the Study of Education, an organization with which KEDI professional staffs are affiliated, it has been possible to involve teacher educators in discussions concerning KEDI reform and to provide the membership with a flow of information concerning KEDI planning and activities.

The Public and KEDI. Direct relationships and informational services to the general public, to students, and to civic leaders have been minimal except in those specific areas where the demonstration projects are underway. Occasional newspaper articles and occasional radio or television programs bring some information to the general public about KEDI and its programs.

Professional Publications. Several publications have been particularly useful in bringing information to the profession, and indeed, in strengthening existing relationships. KEDI News, Studies in Classroom Teaching, KEDI Technical Reports, The Journal of Korean Education -- all are quality publications that aid in keeping the profession informed and that add to the educational leadership of KEDI among educators. The

KEDI Annual Report, geared not only to an audience of educators, but also to a larger public audience, is also most useful. However, in the case of all the publications, their value is limited by the extent of circulation possible.

National and International Conferences. KEDI has hosted a number of national and international conferences. While all of these have not focused specifically on KEDI activities, they have been related to aspects of educational reform that are important in the achievement of KEDI tasks and goals. These have been important, not merely for their professional value in advancing knowledge concerning certain educational matters, but also in terms of their general effect on working relationships with the profession and with the public. Educational leaders from Korea have participated and have gone back to their work with a new and increased knowledge of and respect for KEDI. News articles, radio and television reports have brought to the public an increased awareness of KEDI and its important role in Korean education.

Comment. There is clear evidence that KEDI administration and staff are aware of the critical importance of developing positive relationships with the profession, with the government, and with the public and at the same time assuring a continuous flow of information concerning KEDI, its goals, its plans, its accomplishments. Much effort and many resources have been devoted to this task. However, because of the limitations imposed by financial resources and by limitations in staff, it would appear that the task requires even greater effort and deployment of resources. And - this increased deployment of resources depends to a very considerable degree on increased support for KEDI from government and non-government sources.

Although excellent work has been done with the Korean Federation of Education Associations, it is important that these efforts be extended and emphasized to involve joint planning and joint efforts where feasible. More extensive and improved relationships and cooperative undertakings with higher education, the universities and the junior teachers colleges, are especially important. As KEDI nears the completion of the demonstration and tryout projects and the inauguration of the new educational programs on a national basis, it is essential the teacher education institutions be prepared to modify pre-service and in-service programs in accordance with the outcomes of joint planning and joint educational reform efforts.

More extensive programs - conferences, seminars, and other types of professional meetings - need to be held throughout the nation to involve boards of education, school administrators, and teachers in the development of improved understanding of KEDI's role and the educational reform effort. Professional publications, excellent though they may be, are effective only when they reach a significantly large professional public; hence, efforts must be made to increase circulation and reading. The holding of international conferences might well be expanded and with opportunities for an increasing number of Korean educators to participate.

Additional effort is needed in regard to newspapers, radio, and television. Admittedly, it is difficult to utilize these media frequently to bring to the attention of the reading and listening public the efforts of an educational research and development operation. Such news is not nearly so exciting as many other types of news materials. Thus, it is important that regular news releases be made available to

the media, that press conferences be held whenever possible, that special news items be highlighted through radio and television. As KEDI's own radio and television channels become operative, it is hoped that major use of these will be made not only for formal educational programs but also for informational services as well.

It must be pointed out that what is under consideration here is not a typical public relations program, but a very special public relations program that has as its eventual goal the improvement of education in Korea. The activities required are not ends in themselves, but a means of gaining acceptance, understanding, and support of a vitally important plan and program designed to achieve major educational goals.

### III. THE ELEMENTARY-MIDDLE SCHOOL

#### DEVELOPMENT PROJECT

##### A. ORIGIN

The original purpose of the Elementary-Middle School Development Project was to identify the problems of the current educational system and to find ways of solving these problems. This project, which was the initial and major effort of KEDI, is concerned with designing, developing and implementing a new, viable, elementary and middle school system and in addition identifying the underlying educational development policies. The new elementary and middle school system to be developed is to be a more efficient one and of a higher quality than that which has existed in the Korean educational system. Largely because of the study by Florida State University and the subsequent review of the recommendations by the Korean educators, the Board of Trustees of KEDI established the E-M Project as the focus of KEDI's first five year program. The initial funds to support the E-M Project were obtained by the Ministry of Education, Republic of Korea, from the U.S. Agency for International Development (USAID) as a result of the revised proposal of June, 1972:

The project, which is built upon several years of Korean study, is expected to take five years and will result in a basis for a new nationwide educational program, which will be more responsive to Korea's historical heritage, needs and ideals. The new program should be more efficient and effective, thus permitting the nation to provide education of better quality to more of its children. The Charter of National Education will be the foundation for the reform. Korean educators and leaders representing the broad social interests of the nation, will develop educational objectives which are closely geared to

current national priorities. Building upon the traditions and philosophy of Korean education, modern educational practices and techniques will be developed and appropriately utilized in the new programs.

For this project the Ministry of Education will rely solely on Korean educators and researchers, representing various academic fields. Minimal outside professional assistance will be required and it is anticipated that a wide range of Korean educators, from many different institutions, will participate in the planning and development activities. This broad national participation will insure that all Korean ideologies and points of view are represented in this undertaking.

It is planned to implement the new programs in representative schools for purposes of improvement and verification of their educational effectiveness. During the five year period, coordinated research and development projects and other related supportive projects will be continuously implemented to achieve the overall program objectives.

We believe that continuation of Korean national prosperity, security and independence will depend upon the continual improvement and renewal of the nation's educational programs. Korea's greatest resource is its educated people and their spirit of sovereignty. Improving basic human abilities and fostering the significance of the nation's cultural heritage will assure Korea's social, cultural and economic well being.

#### B. PURPOSES

The purposes of the E-M Project were contained in the proposal to USAID for assistance and support. The following excerpt from the proposal clearly states the basic purposes underlying the anticipated establishment of KEDI and the undertaking of the educational reform effort.

In the past quarter century, Korean people have developed the institutional foundation of democratic education and a gigantic national school system. In spite of the fact that Korean people have strong aspirations for education of their children, and the government has invested a huge amount of financial resources in education, Korean education today is faced with a variety of formidable problems. It is the historic

time for the Korean people to exert an intensive effort for the qualitative improvement of education. If no fundamental change occurs in the educational system in the near future, the prospective trend of school population expansion will pose a serious threat of a continuously increasing educational expenditure beyond the ceiling point of the nation's economic capability. In this respect, low standards of teaching and student learning will not be improved without changing the current system. The rapid expansion of the student population has resulted in an increased demand for teachers which, in turn, has severely constrained the professional quality and preparation of teachers. In the present system, it can be hardly expected that a teacher, who has a large group of students, could alone, significantly raise the effectiveness of education. Unfortunately, the educative potential of the educational system is too weak to realize the educational ideals expressed in the Charter of National Education. The regional gap in the opportunity and quality of education is getting wider, and perhaps is the source of the social and economic inequality which exists between regions.

In this context, the Korean elementary and middle school education is confronted with the following tasks, the accomplishment of which represent the purposes of the present project:

A. The determination of educational ideals and objectives reflecting the cultural heritage, social reality, and future direction of the Korean society.

B. The reformulation and systematization of educational content to correspond with the established educational objectives.

C. The development and utilization of modern educational methods, facilities, and materials to achieve an effective and economically efficient program of education.

D. The establishment of a comprehensive research and development agency to assist the Ministry of Education in formulating educational policy for the nation.

### C. MAJOR PROJECT TASKS

The revised proposal describes the major project tasks to be undertaken within the framework of the E-M Project. These tasks, eight in number, are summarized in the paragraphs that follow.

#### Development and Clarification of Educational Goals

As the first major task this was to include: (1) the development and clarification of national ideals and needs; and (2) derivation of educational implications from these ideals and needs, and (3) the formulation of educational objectives based on those implications. This work was envisioned as a long term task to continue "throughout the duration of this project."

#### Curriculum Development

Based on the results of the first task a new curriculum is to evolve. This new curriculum will (1) reflect the national ideals and needs, (2) provide for the balanced development of children in terms of their cognitive, moral, and effective requirements, and (3) reflect modern knowledge and technology.

#### Development and Production of Textbooks and Other Learning Materials

In order to implement the new curricula into the schools, textbooks and other instructional materials will be developed. The textbooks for each subject area are to be developed in close cooperation with the Ministry of Education. In addition to the textbooks other instructional materials will be developed to: (1) supplement the textbook, (2) enrich the learning opportunities in order to accommodate individual differences, (3) provide for diagnosis of children's learning needs, and (4) include modern instructional media as a learning resource to the education system.

All of the instructional materials are to be designated and developed to apply the most current learning theories and instructional technologies.

In addition to the children's materials supplementary instructional materials to assist the classroom teacher will be developed. These materials are to enable the teachers to perform effectively the varied instructional tasks required under the new system.

#### Research and Implementation of Teacher Education Programs

This task "will include studies on the basic goals, content, and methodology of teacher education programs to insure successful implementation of the new instructional system as well as for long range development of Korean education."

The following are major activities to be included in this task:

(1) research on improvement of pre-service teacher education; (2) research on improvement of in-service education, and (3) training teachers for the implementation of the E-M Project.

#### Design and Demonstration of the Instruction and School Management Systems

"The fifth task in this project is to reform the existing instructional and school management systems in such a way as will provide a more effective and efficient operation within the context of Korean educational realities." The new educational system is to be designed to remedy "the dehumanizing effect of educational methods which are inherent in excessively crowded classrooms." However, attempting to substantially decrease class size while maintaining the conventional pattern of instructional organization is not a realistic solution when Korea's financial situation and continued population growth are considered. For this reason, a flexible organization of instructional units and differentiated staffing are viewed as more realistic alternatives.

### Development and Operation of Educational TV System

The disparity between educational ideals and practices and the performance level of the present educational system of Korea is largely due to the under-development and under-utilization of communication media in Korean education. The educational TV system, designed as a part of the total educational system, will greatly improve Korea's educational system.

This system is to include: (1) the originating facilities (2) the transmitting facilities and (3) the school reception facilities. In addition to the integral support of the student's program for the E-M Project the ETV system will also be used for in-service teacher training, vocational education for youth out of school, for pre-school education, and other needs as they emerge.

### Research and Development for Expansion of Social Education System

School education is not only influenced by the internal conditions of the school but also by the physical and psychological environmental conditions of the community in which the school is located. The E-M Project will include programs for the expansion and improvement of the social education system.

### Comprehensive Research and Development of Educational Policies

Since the research and development tasks of the project are viewed as reflecting Korean realities and conditions, the E-M Project is conceived of as an integral part of the nation's long-range educational development. "In this sense, this comprehensive research and development project will establish a viable foundation for the further development of national education policies." Included in this task

of research and development are: (1) Research and development for the utilization of educational ideals and for the continuous improvement of educational content and methods, (2) Recruiting and training of R and D personnel, and (3) Basic and applied research on major educational problems.

There are three additional goals of the Korean Educational System which were stated as aims in the USAID Loan Proposal. These goals are:

1. To provide each individual with the competence needed to pursue a satisfying life-time occupation.
2. To establish the social interactive skills, values, and attitudes which comprise "good citizenship."
3. To make possible progressive individual development for the enjoyment of esthetic pursuits.

#### E-M Project Goals

Based upon the tasks as outlined in the USAID proposal of 1972, KEDI began the work of clarifying goals and objectives for the E-M Project; examining expectations; recruiting, hiring, and training of staff; and developing a more complete developmental design and accompanying work schedule.

The overriding goals and objectives of the E-M Project were drawn from the original need to establish the project and are reflected in the proposed tasks of KEDI. These are:

1. To develop new curricula that better reflect (a) Korean national ideals and needs, (b) a balance in terms of cognitive, moral and effective learning outcomes, and (c) modern knowledge and technological development and applications.

2. To raise the current achievement level of all children.
3. To raise the achievement level of children in the higher learning thought processes (as reflected in Bloom's taxonomy).
4. To reduce the regional gaps in achievement by equalizing the educational opportunities of both urban and rural children.
5. To provide educational opportunities for more children, especially in the middle school years.
6. To improve the cost effectiveness of the educational system.
7. To improve the accountability and credibility of the educational system to the general public in order to obtain more support for the new educational system.

These goals have become the "output goals" of the E-M Project and are, then, still the bases for the instructional design and evaluation of the project. The original USAID Loan Proposal also carried a plan for organizing and implementing the project. This plan consisted of the following components:

1. Analysis and evaluation of current curricula and instructional practices
2. Design and development of new curricula and instructional system
3. Development and construction of adequate measurement devices

4. Development of instructional programs, materials, and aids
5. Validation of learning programs and new instructional system
6. Training for teachers, administrators, R & D personnel
7. Development and installation of ITV system
8. Production of developed ITV and other programmed materials and aids
9. Public relations work and preparation for the nationwide implementation

It was the intent of the plan to focus on "a total reconceptualization and restructuring of the existing system, not a series of patchwork and discontinuous activities." As stated in the USAID proposal "It is generally recognized that the present Korean educational system, especially at its elementary and middle school levels, is characterized by an inefficient instructional process, an outdated school curriculum with an overriding emphasis being placed on rote memorization of classically academic subjects, and generally a very low cost-return ratio in terms of its contribution to manpower development."

The plan for change is to emphasize four major areas of differences from the conventional school in the present system.

1. A different curriculum which emphasizes educational goals more relevant to both the national and individual needs.
2. A different method of grouping students and administratively organizing the school.

3. The range and mix of instructional resources will be different, including the ways in which these resources will be delivered to the student.
4. The patterns of instructional staffing will be different

Comment

In addition to the stated plan as it appears in several KEDI documents and reports there is one important unstated but implied assumption for planning that has implications for all the aspects or components of the new instructional system. The plan for change which calls for the design, development, tryout, demonstration and implementation of nine years of elementary and middle school instruction in a five year period requires concurrent development of curriculum and materials at several different grade levels at one time. This type of plan, which is a viable one, differs from a plan for change which begins with one grade per year and modifies all aspects of the instructional program in each grade as the children progress. This second type of plan would take a minimum of nine years to implement and has the effect of depriving an entire generation of students of some benefits of improved instruction. Obviously there are strengths and weaknesses related to either procedure, but for Korea's needs at this time the shorter time period affecting more children seems appropriate. However, it should be kept in mind that a plan to implement change in several grades simultaneously requires less change or less modification in some components during the first five year period and requires systematic revision and further modification in subsequent years. Specific to the E-M Project this decision has the following implications:

Curriculum change. In a plan calling for the simultaneous revision of curriculum in many grades it means that the degree of change possible is limited by the child's previous school experiences. For instance, a curriculum for fifth grade students will have to take into consideration the four previous years of instruction and although a completely new curriculum can be developed for children in the first four years which could modify the curriculum for fifth grade the current fifth grade students have not had these experiences. Therefore, the new fifth grade students have not had these experiences. Therefore, the new fifth grade curriculum can approximate the desired new curriculum but it cannot reach it. What this means is that on the surface the new curriculum may appear to be more like the old than what is really hoped for in the new.

Learning materials. Since the learning materials are based on the curriculum and the child's previous achievement in a variety of subject areas, materials developed for the first implementation of the new system will approach the desired materials but must, by the nature of the design, include many compromises. An illustration may assist in adding clarity to this observation. The new instructional design for the E-M Project requires some materials to be used for self study and self directed learning. Materials that provide this option for fifth graders who have had five previous years of experience with materials of this type can be quite different from materials designed for fifth graders who are experiencing this type of activity for the first time.

Instructional strategies. The limitation of instructional strategies imposed by a simultaneous grade level implementation plan are also evident and predictable. Using students to tutor students means that children have been taught, systematically over a period of time, how to tutor. Effective use of small group instruction means that teachers and children have experienced this procedure. Permitting some students to engage in a new experience (in this case instructional TV) while others in the same grade do not, assumes that the child not permitted to be involved will understand why. In this latter case, it is more than just telling the students "they will later get a chance" that satisfies the learner, it is having the chance to do it that adds acceptance to the word. However, even with these limitations, the instructional strategies to be employed can be more closely approximated than is the case with curriculum and materials.

Instructional or classroom management systems. Since the instructional or classroom management system to be implemented is dependent upon the curriculum, the materials and the instructional strategies, the E-M Project plan for implementation will require successive approximations toward the desired or theoretical management system.

However, even recognizing some limitation in full scale implementation of a more theoretically sound classroom management system this aspect of the total E-M Project can be more closely approximated than some other aspects in the early stages of implementation.

School and grade level management system. It is this aspect of the E-M Project that can benefit most in the early stages when the plan calls for simultaneous grade level implementation. The shorter the time line

for implementation the faster the total school can get involved. This means the less chance for developing a feeling of the "have" and the "have nots" within a given school. This means a better chance for all teachers to develop a clear understanding of the purpose and requirements of the new system simultaneously so that all faculty can have a feeling that he/she contributed to the shaping of the system as it is modified and refined based on experiences. This feeling of involvement is one aspect of commitment to the system that will be an essential factor in its success.

In summary, the decision of KEDI to adopt a plan of change that can influence more children, more teachers and more grades in a school in a shorter time period does seem to meet the needs of the Korean educational system. The major weakness of this plan, that of obtaining less change than desired in curriculum modification, if understood in the beginning, can be overcome by planned continued revision and modification over a subsequent five to ten year period.

#### D. IMPLEMENTATION PLAN FOR THE E-M PROJECT

Given, then, that the overriding goal of the E-M Project is to develop, test, revise and implement a relevant, modern educational system for the elementary and middle schools of Korea, the general plan to accomplish this set of tasks has eight components. These components, identified by Dr. Shin Se Ho as major tasks, are:

1. Conduct studies on educational goals
2. Develop curriculum specifications
3. Develop new instructional and learning materials

4. Develop and demonstrate instructional and school management systems
5. Develop and operate educational TV and Radio systems
6. Develop and implement teacher training programs
7. Conduct policy studies and diffusion activities
8. Evaluate new education system

Each of these components are discussed briefly in this report and for each component the plan, perceived progress to date, and a general commentary, where appropriate, are provided.

Educational Goals of the E-M Project.

Whereas the E-M Project goals, as stated earlier, serve as a guide for the E-M Project, the educational goals of the E-M Project serve as a guide for identifying the kind of educational system to be implemented. The KEDI staff and administration, in developing and specifying the educational goals, have drawn upon the expertise of many Korean educators from a number of Korean colleges and universities as well as several U. S. educators including Benjamin Bloom and Robert Gagné.

The educational goals of the E-M Project are an attempt to identify and translate into an educational system the values of the Korean society that reflect the support for the schools. These goal statements reflect, then, what should be learned, when it should be learned, and how learning will take place. Several of these goal statements overlap the goals of the E-M Project and will be repeated here for clarity. The goals are:

1. A major emphasis in the curriculum should include the development of higher mental thought processes such as: problem solving, inquiry skills, and creative thinking.

2. The development of moral and affective characteristics such as attitudes, beliefs, values, and interests should receive a balanced emphasis in both the manifest and latent curricula of the schools.
3. In the light of the current and future needs of the nation, such characteristics as national identity, social responsibility and self-reliance should also be fostered along with the basic concepts and principles fundamental to occupational preparation.
4. The education system should provide students the opportunity to engage in the learning process through active involvement.
5. The educational system should enable the students to play a major role in managing and conducting their own studies.
6. The educational system provides an opportunity for students to make regular progress toward the mastery of instructional objectives.
7. The educational system will enable students to work with learning materials and procedures adapted to individual differences in ability, speed of learning, and learning style.
8. The educational system will be as realistic and as relevant as possible in terms of the Korean nation's economic and cultural reality and needs.

In addition to the more general goals of the new system there are several specific goals or objectives that should be noted at this time. These sub-goals also serve as specific guides to the developers in planning particular aspects of instruction. They are:

1. To develop a system of instruction that reduces the reliance for delivering instruction on the individual classroom teacher as the exclusive presenter of instruction.
2. To develop a system that will provide approximately one third of the instruction for each student through educational radio and TV.
3. To develop a system of instruction that will permit students to spend 35%-40% of their time in self directed learning.
4. To develop student learning units that will include (a) a detailed statement of the instructional objectives covered by the unit, (b) necessary checking and testing devices built into it, (c) basic programmed and other instructional materials, (d) summative tests, (e) directions to other appropriate and readily available instructional materials not included in the unit. These student learning units will be packaged in a durable manner to permit their repeated use for three to four years.

Since 1972 KEDI has conducted a variety of seminars and open meetings in an attempt to gain reactions to and suggestions about the goals and aims of the E-M Project. Meetings have been held for parents and the general public, meetings and seminars have been held with public and private school teachers and administrators, and meetings and seminars have been held with university and college professors, as well as with other academic and instructional scholars.

In addition to the general meetings and working seminars KEDI has involved a large number of Korean educators in different developmental aspects of the E-M Project. Through this involvement KEDI has obtained significant input for its own use and at the same time has developed a support base for its work through persons within the educational community.

As a result of these efforts KEDI has been able to clarify and modify the general educational goals of the project.

KEDI is to be commended for its work to date in stating and clarifying the educational goals for Korea. Since the statement and clarification of goals is an ongoing process the staff of KEDI is encouraged to continue its efforts relative to this task.

In order to do this, KEDI will have to maintain its responsiveness to concerned educators and scholars, will have to expand the involvement of local and regional R and D centers, colleges and universities, and will have to continue and expand its involvement of public school teachers and administrators from all regions of Korea.

#### Curriculum Planning.

The curriculum for the elementary school is divided into nine content areas: morals, Korean language, mathematics, science, social studies, music, fine arts, practical arts and physical education. The curriculum for the middle school consists of these nine content areas plus natural history and English. One of the first tasks of KEDI was to examine the current curriculum goals for each of these areas and to develop the specific objectives for each grade level for each curriculum.

To accomplish this, nine teams were established within the E-M Project with each team being composed of a subject matter scholar (usually a part time research associate with an academic appointment at one of the colleges or universities), a senior researcher (usually a content specialist with

8-10 years of teaching and possessing some management skills), and several content writers (again persons with some teaching and an interest in development). These teams with the assistance of a few scholars employed as consultants analyzed each of the curricula and the textbooks approved by the Ministry of Education to be used during the 1973 and 1974 academic years. As a result of this analysis, course syllabi and list of curriculum objectives for each content area by grade level have been identified for incorporation into later revisions. The course syllabi and the ordering of objectives for each course, for each grade, follow the nationally approved textbook as a guide.

In preparing for the initial revision of all curricula for the elementary and middle schools KEDI has carefully considered the many alternative approaches to such a revision. Having considered the alternatives, KEDI has conscientiously attempted to follow a revision plan that can be realistically managed, can receive widespread acceptance from college and university scholars, can be understood and accepted by teachers, and can include as many of the desired goals as possible. For this KEDI is to be commended. In his report, Benjamin S. Bloom stated:

Many of the curriculum centers I have visited throughout the world have been less than fully successful in these relations. They have encountered very difficult problems of acceptance of otherwise excellent new curricula by teachers, schools, and leading members of the society. I dwell on this because KEDI must do everything possible to maintain these excellent relations if the new developments are to become an integral part of the learning processes in the classrooms of Korea.

KEDI has attempted to follow this advice, and if it is to be successful must continue to strengthen these relationships.

The curriculum development staffs of KEDI are also to be commended for their use of a wide variety of curriculum resources in developing and specifying the objectives for each of the content areas. In each of the content areas there was evidence of a thorough search for exemplary materials and a real attempt to utilize the reference materials where possible. At some time in the near future, KEDI will have to turn its attention to a more careful analysis of the content areas of moral education and Korean language since these were two areas that do not have research based content analyses on which to draw.

In the general area of curriculum development there is one concern that KEDI should address at this time. Is KEDI responsible for developing a "new" curriculum for the schools of Korea? If so, does KEDI presently have the authority to do so? There seems to be some disagreement among educators in Korea as to KEDI's responsibilities and authority in this area. This issue should be clarified as soon as possible in order to set the limits for system revision.

#### New Instructional System and Learning Materials.

In order to develop appropriate materials to meet the needs of children and teachers, KEDI has implemented a General Instructional System Model similar to other instructional systems models found throughout the world. The KEDI model, which is designed "to take into consideration the academic progress of individual students but does not overload the teacher with management problems," has five stages: (1) planning, (2) diagnosis, (3) teaching-learning, (4) extended learning and (5) evaluation.

Planning. The planning stage of the instructional system consists of three tasks: task analysis, lesson plan, and management plan. Each KEDI curriculum team is responsible for the identification, wording, and ordering of the instructional objectives for each grade level and for units within the grade level. These objectives are then organized into instructional units requiring approximately eight to sixteen lesson hours of instruction. As much as possible, these units are to parallel the structure of the textbooks currently in use.

Once the objectives have been stated and ordered the KEDI curriculum teams then develop suggested lesson plans for teachers. These plans contain student learning activities, teacher activities, instructional sequences, instructional media, evaluation plans and latent curriculum aspects. The attempt here is to provide the teachers with as many and as meaningful suggestions as possible so that the teacher will have the necessary information to implement the units and, when necessary, to be able to adapt the instruction to particular school or individual student needs.

The third element of the planning stage is the management plan. Here, KEDI provides the teachers with (1) suggested time schedules, (2) classroom activity suggestions, (3) personnel utilization suggestions to carry out these activities, (4) materials and instructional media needed, and (5) management suggestions to provide for latent curriculum needs.

All of the materials developed by the KEDI staff relative to the planning stage are compiled into Teacher Guides organized by unit and grade level. These Teacher Guides include detailed lesson plans for each hour of instruction with the expectation that the teachers will modify these plans to adapt to their own instructional-learning setting.

Diagnostic Stage. The purpose of the diagnostic stage is to identify the student's level of understanding of the prerequisite needed for the unit to be studied. The prerequisite behaviors, the tests, and suggested learning activities for students needing remedial instruction are developed by the KEDI staff and provided for teachers in the Teacher Guide. One unique feature of the KEDI instructional system is the classification of students as a result of the diagnostic tests.

According to the scores, each student is classified as either having mastery, near-mastery, or non-mastery. For each of these groups teachers are provided with suggested activities appropriate to the group's needs. This procedure of grouping to meet individual needs has been adapted by KEDI as a compromise plan, in an attempt to provide a practical solution to student needs, instructional costs, and realities of what is possible with current student-teacher ratios.

Teaching-Learning Stage. The third stage of the instructional model is the teaching-learning stage. The activities developed for this stage provide for large group, small group, and individual instruction. Large group, or whole class instruction, is provided through teacher directed activities and through ITV and radio programs. It is currently the plan to provide either ITV or radio instruction for every unit with each student receiving 2 instructional hours per day through these media.\*

The teacher directed activities consist of lectures, problem solving, inquiry experiences, discussions, experiments, and others. In addition, through small group and individual instruction, the teachers manage the

\* A more detailed discussion of ITV and IR is provided in Chapter IV of this report.

programmed instruction activities, student observation experiences, field trips, surveying, report writing, simulation, and others. To assist the teacher and the student, KEDI has developed student workbooks or guide books supplementing and/or complementing the textbooks, organized by units into the three learning steps of: introduction, development, and elaboration. The design and development of these workbooks has been a major task of the KEDI staff and to assist in this development KEDI has contracted with nine Provincial R and D Centers, one for each of the content areas. Each of the centers has sent personnel to be trained by the KEDI curriculum staffs and all are now involved in developing student learning activities for many of the units for the second, fourth, and sixth grades. It is anticipated that these same R and D centers will later function as diffusion centers for the large scale implementation activities of the project.

Extended Learning Stage. After the students have completed the activities specified in the teaching-learning stage a "formative test" is administered to determine degree of progress. Depending upon the results of this test each student is identified as either having mastery, near-mastery, or non-mastery of the content. Those students classified as "mastery" are provided enrichment and accelerated learning activities such as programmed instruction, surveys, experiments, or special projects. In some instances it is also suggested that these students serve as tutors or helpers for other near-mastery or non-mastery students. Most of the activities for this group require independent study or small group activities requiring little if any, instruction and supervision by the teacher.

Students classified as "near-mastery" as a result of the formative tests are also provided learning activities that require a maximum of student involvement with a minimum of teacher directed instruction. The activities for this group include programmed instruction materials, workbook activities, and small group cooperative learning.

The group classified as "non-mastery" is the group designated to receive the most attention of the teacher in this stage. Although programmed materials and/or work book materials are to be available to these students the teacher is encouraged to work directly with these students regardless of the activities assigned. It is for this purpose that the management system and the corresponding learning materials of KEDI have been designed.

Evaluation Stage. The last stage of the instructional model is the evaluation stage. In this stage the "summative tests" or end of unit or set of units tests are administered. These tests are to provide information to the student, teacher, and parent as to the degree of mastery of the specified cognitive, affective, and/or psychomotor objectives. Although KEDI provides the teachers with tests and test items the teachers can develop their own tests for this purpose. It is also the intent of KEDI to attempt to assess the unintended educational effects of the instructional system with the summative tests. To assess this aspect data will be collected relative to such factors as latent curriculum and student adjustment.

Specific Instructional Models (by content areas). Based on the General Instructional System Model, KEDI has developed nine specific instructional models which prescribe teaching-learning strategies for each of the content areas. These nine sub-models differ as to format.

Comment. The KEDI instructional system under development does appear to be theoretically sound and designed to meet the immediate needs of Korea as well as providing a system that permits continuous revision and modi-

fication. The promising results of the four small scale tryouts provide some indication as to the viability of the instruction system and the general strengths of the instructional materials. By clearly specifying the five stages of the instructional model and by attempting to enumerate the various tasks and activities within each stage, curriculum developers, teachers, and students should be able to understand the entire system within and between content areas. The consistency of approach, though more difficult to apply in some content areas than other, should also facilitate, within content areas, curriculum revision as well as across content area, curriculum change and modification. However, one word of caution should be noted here. In attempting to develop a total system with some consistency across content areas, KEDI should constantly examine the objectives being met and those not being met to determine if the system is becoming so rigid as to exclude certain types of objectives. To date most of the objectives that the program seems to facilitate are those of a cognitive nature. This may indicate that for some content areas and for some objectives within all content areas, a different instructional system should be considered.

Since major curriculum change is an important goal of the E-M Project it is important that both types of curriculum change, within and between, be foremost in the minds of all curriculum developers as the system and materials are tested and revisions are suggested as a result of the tests.

#### School Management System.

Because the new instructional system requires a variety of instructional procedures, within a particular classroom and, in the case of ITV, across several classrooms, it has been necessary for KEDI to design a school manage-

ment system to facilitate these changes. In the initial planning stages of the E-M Project one goal of the project was to develop a coordinated management system with instructional strategies that could reduce the instructional class size through differentiated staffing. It was originally proposed that the students be divided into instructional units of approximately 300 and that the management of this instructional unit become the responsibility of a four person teaching team. Each team would consist of a master teacher and three teaching assistants with the total cost of the team being the same as or less than the current teaching personnel costs for 300 students. However, as a result of discussions with school administrators and teachers, and as a result of the third small scale tryout in which teacher aides were used in the instructional process this plan is not being utilized and tested as part of the large scale demonstrations of 1975 and 1976.

The management system currently under development is designed to facilitate the instruction of 60-70 students with one classroom teacher. Through the use of ITV and radio large groups of students can be receiving instruction thus freeing the teacher to work with small groups or individual students. Through the use of programmed materials and student workbooks some students can be studying independently while the teacher concentrates on others in the classroom. Also the current plan is now examining the effectiveness of students, who have mastered the tasks, serving as tutors and helpers to others. This strategy may provide additional time for the teacher to work with small groups. The KEDI staff, through an analysis of the desired instructional system, has

provided in the Teacher Guides suggestions and plans for properly managing the classroom.

Under the revised management system volunteer teacher aides are being considered with these aides functioning more as clerical support staff than direct instruction to students.

Comment. The classroom and school management system of the E-M Project is an integral part of the total project and as such has had its effect on all the components of the project. By considering both long term needs and immediate and implementable school management changes, KEDI is incorporating into the instructional system student materials and instructional strategies that can facilitate the change-over from teacher directed, whole class, instruction to a more student oriented, mastery learning centered, educational system.

Although the initial planning efforts for the new management system were built on the assumption that teams of instructional personnel composed of one professional and three para-professionals could provide the needed instruction for three hundred students, this plan currently seems unfeasible. Whether or not such a plan can ever gain widespread acceptance in Korea will determine when, if ever, it can be employed. Instructional teams such as this will require the strong support of nearly all of the present public school teachers and administrators. The concept will require the support of at least a majority of teacher educators. And finally, this plan will require the support of the parents of the children first subjected to such a team. Convincing each group of the benefits and advantages of such a plan will take more than a few pilot tests in a few highly selected schools. It

will take hard data from real situations. It will take effective materials and instructional TV and radio programs. It will take carefully documented role specification and competencies needed by professionals and by para-professionals to perform the necessary instructional tasks within the E-M Project.

The staff of KEDI, being aware of the need for the professional and lay support and what it will require to achieve this support, has modified the time line for implementing these specific teams. KEDI is now examining alternative instructional teams such as within grade teachers and volunteer aides, to mention just one. Differentiated staffing does appear to have some advantages in the new E-M system but just what levels of staff will be required will depend somewhat on the effectiveness of the learning materials and instructional TV and radio, and the instructional strategies being developed. It seems, then, for the immediate future that the emphasis of the management staff should be with classroom and grade level management with less concern for school management. The concern for schoolwide management changes will return as an emphasis after all teachers and all grades in a given school are actively involved in the implementation of the new program.

### E. IN-SERVICE AND PRE-SERVICE EDUCATION

A program of educational reform of considerable magnitude, such as that envisaged in the Elementary-Middle School Project, calls for a heavy investment of time and resources in a carefully designed program of in-service teacher education. The emphasis of the reform effort on new materials, new and innovative instructional systems, the use of radio and television, and a new school management system place a high priority on comprehensive and continuing in-service education that will upgrade teacher qualifications, that will prepare teachers to function in new ways in new educational settings, and that will engender in teachers enthusiasm and support for the new educational program.

Related to the need for effective in-service teacher education is a matter of equal importance -- the need to work cooperatively with teacher education institutions in the development of a new program of pre-service teacher education geared to the Elementary-Middle School Project and the new approaches to the education of children and youth that are implicit in it. Such a program is necessary if new graduates are to be prepared to function effectively in their teaching tasks once the reform program is implemented on a nationwide scale.

KEDI Administration and staff have indicated their serious concern for in-service teacher education and have been engaged in programs of training for teachers and administrators in the 14 experimental schools and the 130 cooperating schools in which there have been small-scale tryouts and large-scale demonstrations of the new instructional programs.

The in-service education model, developed by KEDI staff and utilized since the initial tryouts in the spring of 1973, appears to be well designed and effective within the restrictions imposed by limited resources and manpower. The in-service program is designed and offered by the Bureau of Educational System Development. Faculty members for the in-service education program are KEDI staff as well as part-time consultants from higher education institutions, from provincial and district schools, and from education ministries--working together as a teaching team.

The 30 hour training program covering a period of four days is offered during the vacation period just prior to the beginning of a tryout of demonstration and is held in a central location, usually a school, in the district where the experimental project is to be conducted. Participants include all school personnel who will be involved in the project - classroom teachers, principal, vice-principal, master teachers, district and provincial supervisors.

Diagnostic tests are administered to determine those areas of knowledge and skill which may need special attention and emphasis as well as those areas in which the participants already have a high level of competence. The areas covered by the instructional program deal generally with the following topics: nature and role of KEDI in Korean educational system, the Elementary-Middle School Project, role and importance of innovation in education, the new instructional and school management system, nature and purposes of tryouts and demonstrations, the new instructional materials (work-books, teacher guides, instructional television, instructional radio,

evaluation materials), the characteristics and utilization of the new materials, subject matter subsystems, specific use of ITV and IR, the KEDI instructional model. The use of the KEDI instructional model as the basis for the in-service education program is not only an effective teaching process, but serves to acquaint participants with the model and its operation and use in the classroom.

Evaluation of the in-service program is made through the use of pre-tests and post-tests dealing with cognitive information, through evaluations by participants, and through continued observation of the performance of those who have completed the in-service program. For a period of the first four weeks of the school term during which the tryout or demonstration occurs, one or two KEDI staff members from the teaching team remain in the school engaging in follow-up activities. Teachers and other school personnel are observed, conferences are held on individual and group bases, and assistance is provided to all personnel involved in the new educational program. A newsletter containing question and answer data dealing with common problems encountered by teachers as they become involved in the new educational program is published on an irregular basis and distributed to all schools involved in the E-M Project. After the four week period, KEDI staff make occasional visits once or twice a month to give continued supervision and assistance.

Plans for the continued improvement of the in-service program are being developed by KEDI staff on the basis of the experience of the first two years and the evaluative studies that have been undertaken.

Among these are the following: the development of an attitude scale to measure teacher attitudes towards innovative developments and practices; increased emphasis on practical applications of theory; clarifying the differences between present educational programs and practices and those planned for the E-M Project; development of ITV programs for in-service education; encouragement of visits and observations by teachers from non-tryout and non-demonstration schools.

Further, in anticipation of the impending large scale demonstration that will be nationwide in its scope and that will include all subject matter fields of elementary school grades 1 - 6 and six subject matter fields of middle school grades 7 - 9, a number of specific tasks have been undertaken and plans are being developed. The junior teachers college administration and faculty are becoming involved to a limited extent in the planning; extensive use is to be made of ITV and IR; text materials are to be developed. Already in all provinces supervisors and other senior staff have been trained to serve as faculty members for in-service education programs in their regions. Next year plans call for additional training for selected individuals.

Although nationwide implementation of the total program could be authorized after the completion of the last scheduled large-scale demonstration in February of 1978, little opportunity or resources have been available to KEDI administration and staff to develop complete and comprehensive plans for an in-service education program that would include all teachers in both elementary and middle schools. Neither has there been possible any comprehensive planning regarding the pre-service education of new elementary and middle school teachers

who may be entering the system by 1978. KEDI is aware of the need and the serious implications arising from inactivity. However, resources currently are not adequate for all tasks that now exist or that loom on the horizon.

Comment. Considerable credit is due KEDI administration and staff for the excellence of the in-service education model that has been developed and implemented, for the quality of the in-service program in spite of limitations imposed by resources, for continuing efforts to evaluate and improve the in-service program, and for perceptions and insights regarding new and developing needs related to both in-service and pre-service teacher education. However, it is clear that improvement of the present program is needed, that plans for a nationwide in-service education program must be completed and be ready for implementation, and that cooperative efforts with teacher education institutions must be undertaken for the development of a new pre-service program of teacher education.

KEDI staff and administration are aware of the needs of the present in-service education program: a greater period of instructional time, development of ITV and IR teaching materials, more intensive and extensive follow-up activities on a continuous basis, development of additional text materials, an expansion of the program to include other teachers in both experimental and non-experimental schools. There is equal awareness of the need to develop and have ready for implementation a program for nationwide in-service education of all elementary and middle school teachers and other personnel at such time as authorization is given for an extension of the educational

reform program to all elementary and middle schools. While no date is yet established, it is possible that authorization could be given to inaugurate the program in 1978 or 1979. Obviously, such a massive undertaking will require as much advance planning and lead time as possible.

Of similar importance and also recognized by KEDI is the need to undertake planning immediately for the development of a new program of pre-service education that will meet the new demands of the instructional system contemplated in the E-M Project. Such planning will require cooperative efforts involving teacher education institutions, the national and provincial ministries of education, professional education associations and organizations, as well as educational leaders and practitioners throughout the nation. The magnitude of the task and the urgency of time are such that the need for an immediate effort is clear.

KEDI already has on the staff qualified leadership for all three tasks outlined. However, the ability to undertake and complete these tasks effectively and efficiently is hindered by lack of financial resources and manpower. The most obvious solution is increased national support for KEDI that will make it possible to increase the staff and to undertake the needed projects. However, recognizing that resources are limited and that budget requests are not always fully met, it may be necessary for KEDI to reappraise the various programs and projects currently underway and to make decisions to limit or eliminate certain activities in order to devote added resources to the tasks of in-service and pre-service teacher education. Perhaps

greater coordination between the Bureau of Policy Research and its in-service teacher education projects and the Bureau of Educational System Development would produce some useful outcomes. However, such coordination is only an example of possible efforts that might be undertaken and in itself would not solve the problems of limited resources now faced.

Whatever decisions are made must be made soon because of the importance of teacher education to the E-M Project. It is not an exaggeration to state that the most critical element in the development and implementation of a major education reform is the quality of teaching and the ability of school personnel to develop the competencies, attitudes, and understandings needed for implementation.

## F. EVALUATION

### The Evaluation Plan

The evaluation plan developed by KEDI for the E-M Project includes evaluation of the many components of the project (formative evaluation) as well as the outcomes or overall effectiveness (summative evaluation). This plan has been facilitated by two other actions in conceptualizing the project. These are the careful specification of the goals for the project, and the specification of the instructional model. The specification of the goals in unambiguous terms has provided the evaluation team the necessary parameters around which to build the summative or "pay-off" evaluation plan. By specifying the instructional model, specific aspects of each of the components, and the intent of each of the components, all curriculum developers, media specialists, researchers, and evaluators have been provided guidelines for establishing the several formative evaluation plans.

Pay-Off Evaluation. The "pay-off evaluation plan" is designed to provide the needed information around each of the five "pay-off goals." These goals of improved achievement, better cost effectiveness, reduction of current regional gaps in achievement, expanded educational opportunities, and better acceptance of the educational system by the general public, have been examined to determine instruments needed, number and kinds of students, data collection procedures and processes for statistically analyzing the data. As a result of the four small scale try-outs the evaluation team has been able to assess some components of this plan and where appropriate has modified and clarified the plan. The major test of this plan, however, is just underway with the first large scale demonstration of the E-M Project.

Comment. The "pay-off evaluation plan" as reported in the various KEDI documents is a well conceived and theoretically sound plan. However, as is the case of all summative evaluation plans, there are problems of implementing the theoretical plan. The KEDI staff has already begun to encounter some of these problems while others have been identified by outside consultants and concerned academicians. Certain of these problems, stated in question form, are as follows:

1. Who will be responsible for developing and implementing the achievement tests needed to compare the E-M Project with the conventional program?
2. What costs are to be included in the educational costs when comparing the E-M Project instructional system to the current system? Who will define and who will approve these costs specification?
3. What will be the criteria for determining adequate progress toward the terminal goals for each of the demonstration stages?
4. At what stage in the development plan do other goals become part of the pay-off goals? e.g. When is the goal of curriculum redesign and restructuring to become a pay-off goal?

KEDI should begin to compile a list of such questions and where and when appropriate provide answers to these questions. Since most, if not all, of these questions require decisions and sometimes policies

made either at the top administrative level at KEDI or cooperatively by the Director of KEDI and the Ministry of Education it is important that such questions be formally reviewed on a regular basis.

Formative Evaluation. The formative evaluation plan of the E-M Project, though not a formalized plan, is viewed by at least some of the KEDI staff as consisting of two major types.

The first type, Kim Hogwon reports, is that of clinical evaluation. This type of evaluation is built into all of the developmental activities and is an ongoing process. As curriculum objectives are stated and sequenced they are reviewed and evaluated by a number of persons both within and outside of KEDI. The materials are evaluated throughout the development stage to determine if they meet the program goals and the model specifications. The instructional model and proposed instructional strategies are constantly reviewed to determine their application to various content areas and various units within each of the content areas. Through the four small scale tryouts, KEDI developers have been provided information as to the effectiveness of the various components of the system essential for revising and modifying each. This type of evaluation has as its major emphasis evaluation of each of the model components more or less independently of the other components.

The second type of formative evaluation might be viewed as systems formative evaluation. This type of evaluation is concerned with the interaction and the general effectiveness of the various components when they are operating together first in a classroom and then in a school.

One major feature of the formative evaluation plan of the project is the small scale tryouts and the large scale demonstrations. These field trials are designed to test and verify the effectiveness of the

total system as well as that of each of the components of the system. The small scale tryouts involved either a single grade or, at the most, two grades for a very limited period of time and were designed to test the feasibility of the teacher guides, student workbooks, programmed materials, ITV and IR, student assessment instruments, and the evaluation design. The large scale demonstration projects, which are just underway are designed to test the effectiveness of the project in 45 elementary and middle schools throughout all of Korea. These 45 schools will constitute a representative sampling of schools from large city, small city and rural communities.

#### First Small Scale Tryout

The first small scale tryout occurred between May 14, 1973 and July 5, 1973. A total of 745 students were involved from grades 3 and 5 in two elementary schools in Seoul. The subject matter tested was arithmetic (division and plane and space figures in geometry) and science (life cycle of plants, light and color). The instructional materials used in this tryout included workbooks, programmed materials, assessment instruments for each unit, teacher guides, and ITV programs.

The specific objectives for this tryout were:

1. To verify the feasibility and effectiveness of various instructional materials which KEDI is now developing.
2. To verify the feasibility of a new instructional procedure which KEDI has developed by applying it to mathematics and science instruction at third and fifth grade levels.

3. To obtain information for the improvement of instructional materials and the materials development procedure.

Some of the findings of this tryout indicated:

1. That the general model of Planning, Diagnosis, Teaching-Learning, Extended Learning and Evaluation seemed appropriate for the two subject areas of mathematics and science.
2. That approximately 90% of the students in each grade in each subject area obtained mastery of the units.
3. That although revisions in materials were needed, the materials were feasible as packaged for this tryout.
4. That the teachers guide provided good guidelines for the planning of instruction for the units under study.

#### Second Small Scale Tryout

For the second small scale tryout, 1,482 students from three elementary schools, two in Seoul and one in Inchon, were selected. Twelve second grade classes from these three schools were randomly selected for the experimental group and eight classes in these schools served as the control group. There were 906 students in the experimental group and 576 students in the control group. This tryout, which occurred during November, 1973, included moral education, Korean language and arithmetic. This tryout differed in several ways from the first tryout: for the first time a control group would be used, two different subject areas were selected as well as one remaining the same, and the units would correspond in time and content to those being studied by most Korean children

in the second grade in November of this year.

The objectives for this tryout were:

1. To verify the appropriateness of the KEDI general instructional model for instruction at the primary level.
2. To study the effectiveness of the KEDI instructional system compared to the current instructional system.
3. To obtain information for the improvement of instructional materials and material development procedures.

The findings indicated that:

1. There was a significant difference (at the .01 level) between the KEDI group and the control group in all three subject areas.
2. The average achievement score at the end of the tryout was 85% mastery or better for all three subject areas.
3. Although many teachers found the teacher guides very helpful in outlining objectives, the guides were too detailed for teacher classroom use and should be revised.

In summary, as a result of this small tryout the E-M Project system seemed to be appropriate; however, all materials and guides should undergo revision.

#### Third Small Scale Tryout

The third small scale tryout was for a longer period of time than the first two, extending over an eight-week period from October through November 30, 1974. As in the second tryout, two groups of students were selected, a control and an experimental group.

The sample was third graders in four elementary schools: 851 experimental and 690 control. This tryout included content from eight of the subject areas found in the third grade; moral education, Korean language, arithmetic, social studies, science, physical education, music and fine arts.

The objectives of this tryout were:

1. To validate the feasibility and the effects of the new instructional system, when applied to the classroom instruction, covering all subject matters of one grade.
2. To validate the effects of the new management system in the schools, when part of the variables are put into practice.
3. To obtain relevant information and data for the modification of the new educational system.

In addition to the longer tryout period, this field try differed from the other two in several other ways: All subject matters of one grade were put into the tryout. This is different from the previous tryouts which dealt with only two or three subjects in the grade level. The sub-models prepared along the lines of special needs of each subject matter were systematically put into the third small scale tryout. A larger number of instructional materials and broadcasting media were utilized, including radio for the first time in any small scale tryout. The timetable for the grade was unified when it came to ITV or IR radio programs in order to analyze its impacts on the school schedule at large. The instructions utilizing broadcast media were directed by

teaching aides instead of the teachers. This was done in order to assess the feasibility of possibly using aides instead of teachers in the new educational system.

The findings of this tryout were:

1. That there was a significant difference between the experimental (KEDI) group and the control group in all content areas.
2. That the role of the aides as defined for the tryout should be re-defined or more clearly defined to students, parents, teachers and other educators before utilizing the aides in future tryouts.
3. That the teacher guides were helpful but still too detailed in many instances.
4. That the diagnostic and summative tests be carefully analyzed and, in some cases, lengthened before the next tryout or demonstration.
5. That the workbooks were generally helpful but the programmed sections needed to be revised extensively.
6. That the general management system should be reconsidered in light of the reluctance to continue the use of aides.

#### Fourth Small Scale Tryout

Although the fourth tryout was completed prior to the November, 1975 site visit, the KEDI report of this tryout was not yet available. Achievement data available to the visiting team for this tryout did indicate, however, that there was still an increase in achievement in all subject areas for the units implemented in this tryout. A more complete analysis of the results of this tryout will be included in later reports.

Comment

The emphasis given to the formative evaluation of the E-M Project within KEDI is one of the strengths of the overall E-M design. As much as anything, it is a reflection of the outstanding research capabilities of the leaders and researchers within KEDI. As a result of training provided within KEDI to their own staff, training provided at FSU and elsewhere to the KEDI staff, and by the proper selection of new staff, the technical and professional staff now at KEDI are capable of utilizing data from the large scale demonstrations to determine alternative modifications and revision to the system.

In preparing for the large scale demonstrations KEDI researchers have identified what they refer to as intrinsic goals of the new system. These goals are to represent the characteristics of the new system and are to serve as the criteria for evaluations. These goals, as stated by Shin Se Ho are:

1. Individual students will be provided with more learning experiences with special emphasis on higher mental processes such as problem solving, critical thinking and creative thinking abilities.
2. Individual students will be provided with more learning experiences for better internalization and acquisition of values and attitudes, productive skills and knowledge that are uniquely needed for national development.
3. The learning progress of individual students will be periodically monitored, and the results are to feed-back into the teaching-learning processes.

4. Individual students will be provided with more opportunities for self-learning.
5. A variety of learning through supplementary instructional materials and media sources will be available for a better mastery of learning objectives.
6. Students will have much access to such as supplementary and enrichment programs, flexible classroom organization to achieve mastery of given objectives.
7. Students will have more opportunities to interact with their teacher individually in the course of their daily school life.
8. Teachers will spend more time for teaching and guidance activities.
9. Schools will be managed and operated under carefully applied principles of the advanced management sciences.

As KEDI begins to accumulate data from the large scale demonstrations there will be a growing need to examine the data from an overall project perspective as well as within content areas. In examining the development and evaluation activities over the first three years of the project it is evident that each of the nine content areas have developed diagnostic instruments, materials, and instructional strategies in keeping with the overall instructional system and have independently worked toward achieving all of the intrinsic goals. This may be appropriate. However, as data are collected in the large scale demonstrations KEDI researchers and developers must now begin to analyze the data across content areas before deciding on the next steps. This will necessitate the formation of teams of specialists

organized across content areas to examine the data and to suggest alternative plans for reaching the desired goals.

These teams should be organized to maximize the individual expertise of the staff members from each of the content areas and each team should focus on a limited set of concerns. There will be concerns about the strengths and weaknesses of the diagnostic and assessment instruments. Are we teaching one thing and measuring another? Is the time for diagnosis too much or too little? Is the information from the student tests organized so that the teachers can utilize it? Do the teachers know how to utilize the test information?

There will be concerns about the materials. What materials work with some students and not with others? When should the materials be changed and when should additional materials be provided? Were the materials used as they were designed to be used?

There will be concerns about the teacher's role and different abilities of the teachers to implement the system. What are some of the factors that account for the differences between classes and between schools? When does the system provide too much and when does it provide too little information to the teachers? How long does it take for the teachers to be able to master the content and the methods associated with the E-M Project? What has happened to the teachers work load because of this new system?

There will be concerns about the role and function of the instructional TV and radio. There will be concerns about the strains and stresses the total project puts on some students as well as for the improved guidance and assistance it may provide.

There are other concerns that will be identified as the project progresses and those concerns can best be examined across all content areas. Since much of what is evaluated within the framework of formative evaluation is related to means rather than ends, the orchestration and coordination of these activities is of utmost importance. For this reason, KEDI may find it necessary to assign this coordinating function to one individual.

### G. SUMMARY AND RECOMMENDATIONS

The Elementary-Middle School Development Project of KEDI is a five year project charged to develop a new educational system for Korea. This new system is to be a Korean system, developed by Koreans for Koreans, integrating into one system up-to-date knowledge about learning and the learning process. The aims of the project are: to improve the curriculum, to provide for higher level thought processes at all grade levels, to reduce the educational gaps between the urban and rural areas, and to provide a more efficient educational system.

Since its beginning in 1972 the project has moved steadily toward the goal of providing a full scale demonstration of the new educational system in grades two through eight by the 1977 school year. Beginning with a small staff in the early stages, KEDI has recruited, hired, trained, and maintained an excellent staff of educators now numbering over 200. Of this group about 10% are PhD's, 50% have master's degrees and the rest are specially trained teachers, educational technicians, programmers, and materials developers. This group of professionals with the assistance of special overseas training programs, mostly at Florida State University, and through specially devised training programs at KEDI have developed into an operating team committed to the project and to the underlying assumptions of KEDI for change. In addition to the KEDI staff the project has drawn heavily on the expertise of many Korean educators through seminars, advisory groups and consultants. Another procedure utilized by KEDI to draw upon the expertise and resources of the Korean educators is through the involvement of the provincial

R and D centers. Currently, nine such centers are involved in developing student materials and teacher guides to be used in the large scale demonstration project. This involvement of researchers, developers and master teachers from the R and D centers, trained by KEDI to develop materials suitable for the new system, has enabled KEDI to increase its materials development without a drastic increase in the regular staff. This procedure of involving the centers should also assist in gaining more enthusiastic support and utilization of the new curriculum and materials when they are implemented into the schools. To date one would have to agree that KEDI has seriously and consciously attempted to develop a Korean system, by Koreans and for Koreans. However, this is not to mean that KEDI has not drawn upon the experiences of others throughout the world. On the contrary, KEDI, in designing the total project, in examining the curriculum, in looking for modes and methods of instruction, and in developing assessment and evaluation procedures has examined what exists and, where applicable, has modified that which exists to meet the needs and resources of Korea.

Considering the enormous scope of this project and the concern for completely revising and modernizing the total Korean educational system, it is difficult to find parallels anywhere in the world. Most educational change in other places in the world has been more modest, more piecemeal, and more limiting. Considering then the breadth of the problem and the resources available, KEDI has been advancing steadily toward the stated goals for the E-M Project.

Based upon this premise some recommendations for consideration and discussion are stated in the following paragraphs.

1. A Project Director should be appointed for the E-M Project.

This individual should have the overall responsibility of coordinating the development, implementation, and revision of all aspects and components of the project. The procedure of distributing these functions among various project leaders seems appropriate in the early stages but now, with the large scale demonstrations underway, a different process of coordination is needed. Many difficult decisions will have to be made in respect to revisions needed and resource allocations to meet these needs for which timeliness of the decisions will be most important. Some one person, not a committee, who is responsible for all aspects of the project, will have to be responsible for these decisions.

2. A second five year plan should be developed which specifies the major modifications that will be needed to reach the original goals. This plan should take into consideration the limitations currently imposed upon the project staff by such factors as: the national textbooks now in use, the limitations of space and facilities, the prior experiences of the upper grade level children, and the current subject area definitions of curriculum.

This second five year plan should begin to emphasize some of the macro issues of the educational system, issues such as the national, regional, and local administrative, fiscal, and legal changes necessary if the E-M Project is to meet its goals. Is it possible for the E-M Project to have the necessary impact on the national and regional educational system without some modification of national and regional policies? What support must KEDI enlist if changes are to be made?

3. The major pupil assessment instruments should be developed as soon as possible so that these instruments can be reviewed for content and concepts by a wide range of Korean educators. One of the key elements in the final evaluation of the E-M Project is the instruments used to measure the outcomes. Since the development of the achievement or assessment instruments is now the responsibility of KEDI it is important that these instruments be accepted by most educators as measuring learning outcomes and not the means to the outcomes. Any concern for system specific tests should be minimized by KEDI in order to get wider acceptance of the project ideals.

4. KEDI researchers should continue to monitor the E-M Project for purposes of identifying specific research problems related to learning, instruction and schooling. Once these have been identified, KEDI should encourage both KEDI researchers as well as researchers in other agencies, colleges, and universities to undertake studies of these problems in order to strengthen the education of all Koreans. Examples of such studies might be: age and grade level Korean language lists based on research in language acquisition and language usage, comparison of attitudes and achievement between Seoul slum children and children of the rural areas, and studies of Korean child development specific to the Korean culture, both urban and rural.

5. KEDI should begin now to examine the role of the students as tutors or helpers in the classrooms. If this is a viable alternative to reducing class size and relieving the teacher of some

management concerns, then special materials and classroom aides may have to be provided both to teach students how to tutor and to give the tutors materials with which to work.

6. KEDI should explore the possibility of obtaining portable, field type, TV cameras and other hardware to provide the capability of producing programs that are more realistic and natural. KEDI's current ITV and IR facilities are for broadcast purposes and are generally bound to studio type programming. They do not lend themselves to portability or transportation or field type recording. KEDI should consider among alternatives a mobile van or super 8 mm filming.

7. KEDI should begin to explore with the Textbook Compilation Bureau of the Ministry of Education alternative cooperative arrangements for considering curriculum revisions. If KEDI is to be charged with the responsibility of designing and developing new curricula, then, some administrative procedure must be agreed upon that permits both units to function effectively. However, regardless of the administrative arrangement finally agreed upon, it seems essential at this time that the textbook editors of MOE should be working very closely with the development staff of KEDI.

8. KEDI should begin to explore the feasibility of establishing one elementary school and one middle school as development or prototype schools which are free from conventional regulations and constraints. Since the success of the E-M Project will depend upon the extent to which the new instructional system can be incorporated into a new management system, it is important that the new management system be developed, tested and demonstrated in a real situation under the control of the KEDI staff.

#### IV. EDUCATIONAL BROADCASTING

##### A. INSTRUCTIONAL TELEVISION AND RADIO

###### Introduction

The Korean Educational Development Institute has established an educational broadcasting station which is responsible for broadcasting educational programs developed for the various KEDI projects. Its primary function is to enhance the effectiveness of instruction through the proper utilization of instructional radio and television in the instructional processes in the classroom. Instructional radio programs are aired over an FM channel and upon completion of the facilities, ITV programs will be broadcast in color over two UHF channels.

While the primary purpose of the educational broadcasting network is to enhance instruction in the school classrooms it will also serve the very important function of broadcasting programs in such continuing education efforts as High School of the Air and Correspondence, in-service education for teachers, social reform programs such as the new community movement, and other education efforts affecting Korean life.

At the present time educational programs actively related to KEDI's instructional television and radio can be grouped under two broad headings: (1) Those in the elementary-middle school development project (E-M Project), and (2) Those in special programs such as the Air and Correspondence High School, teacher training courses, programs for pre-schoolers and adults, and social education projects such as the Saemaeul. While the E-M Project was initiated and established from the outset with KEDI, some of the special programs were initiated and established prior to KEDI's beginning but are now, as per a previous design, in the pro-

cess of being assigned to KEDI's jurisdiction.

The television and radio broadcasting facilities of KEDI are intended to be exclusively devoted to the broadcast of educational programs throughout the Republic of Korea. The network will accommodate two UHF channels for ITV and one FM channel for radio. Appended to this report are black and white photographs of KEDI's various broadcast facilities. One must realize that at the time these photographs were taken, KEDI's broadcast facilities and equipment were in the initial stages of installation and "shakedown" processes.

#### Technical Data

The original primary responsibility of KEDI's educational broadcasting station was to broadcast educational programs associated with the E-M Project -- a new educational system for the primary and middle schools. Its primary purpose was to enhance the effectiveness of classroom instruction (grades 1 - 9) through the appropriate utilization of instructional radio and television programs. While the original role of KEDI's educational broadcasting programs has now enlarged to include the several special projects already mentioned, the total effect of their presence on the educational broadcasting effort, financial and otherwise, is not known at this time. However, a tentative analysis of the cost factors related to the educational media aspects (TV, radio, and print) of the E-M Project was developed by Dean T. Jamison, Chairman, Economics and Educational Planning Group of the Educational Testing Service, Princeton, New Jersey and Yoon Tai Kim, Chief, Section of Research Coordination, KEDI. The analysis shows that development and start up costs were \$3,889,000. Program production costs (capital plus recurrent) were to be \$710 per television program assuming each TV program to be 20 minutes

in duration and the capacity of the TV studio to be 1,860 per year; and \$31 per radio program assuming each radio program to be 15-20 minutes in duration and the radio studio's capacity to be 9,620 programs per year. Transmission costs (site preparation and construction plus recurrent costs) were \$116 per hour for television and \$62 per hour for radio assuming that the channels will transmit for 8 hours a day and six days a week (or 2,500 hours per year) using 7.5% discount rate. Reception site costs are divided into two components: the first is purchase, installation, and maintenance of TV and radio receivers; and the second is the purchase of printed materials. Television and radio costs, at a 7.5% discount rate, are \$251 per year per three classrooms. Reception site equipment will be shared by 180 students assuming an average of 60 students per classroom and therefore the cost per student for television and radio is \$1.40. If print is included, the cost rises to \$4.00 per student at the elementary level and \$4.70 per student at the middle school level. The total print cost per student per year, assuming a class size of 60 students, is \$2.60 at the elementary school level and \$3.30 at the middle school level.

The formal authorization of the educational broadcasting station was established by the KEDI law, #2616 and the Enforcement Decree, Presidential Decree #6899, on October 11, 1973. On May 14, 1974 the official groundbreaking ceremony for the broadcasting station took place at its site location in Umyeon-Dongsan, Gangnam, Seoul. On December 9, 1973 construction on the transmitting station was begun. It is located outside the town of Chechon in North Chung Cheong Province. The Korean Ministry of Education (MOE) and the Tethered Communication.

Corporation (TCOM) developed a contract effective as of December 23, 1972 for the purchase of all necessary transmitting equipment. On February 26, 1973, the National Assembly approved the loan proposal developed for this purpose and the loan agreement between the Ministry of Education and Export-Import (EXIM) Bank was formally signed on May 10, 1973. On December 9, 1973 civil engineering began on the transmitting site near Chechon. Full scale production is expected to result in 1,800 ITV programs by the end of 1977.

The TCOM system is a "tethered" helium filled balloon to which transmitters are attached. From this transmission site near Chechon two-thirds of the South Korean land area will be able to receive ITV and IR programs originating in Seoul. The second step in transmission development calls for a second TCOM site to be established in one of the southern provinces in order to provide program reception to the rest of South Korea's land area.

All of the educational programs will originate in KEDI's ITV and IR studios in Seoul and be relayed to the TCOM site on a C band microwave link. Several programs can be transmitted simultaneously to the TCOM site and the electronic hardware in the balloon's platform will separate the respective radio and television signals and retransmit the program over a 60 mile radius with a FCC grade A signal and over a 90 mile radius with a FCC grade B signal. The TV channels operate with an effective radiated power of 10,000 watts.

#### Program Planning and Production

The broadcasting network is to be used exclusively for educational broadcasting purposes. Programs to be broadcast will follow the step by step procedure stated on the next page.

Step 1. Elementary and middle school programs for classroom instruction and Air and Correspondence High School and college programs.

Step 2. Teachers pre- and in-service training programs. During this step nationwide signal reception will occur.

Step 3. Social education programs and those with cultural and specific instructional value will begin.

The broadcasting station organizations is divided into four major sections: (1) programming, (2) production, (3) engineering, and (4) transmitting.

The programming section is responsible for planning and programming all programs; planning any staff training to be undertaken either at home or abroad; and researching, developing, and producing the wide assortment of broadcasting materials found necessary.

The production section, so called "software" section, is responsible for the production of all the broadcast programs. The producers in the production section cooperate closely with the researchers in the development and diffusion bureau who are responsible for the broadcast program scripts.

The engineering section is the "hardware section" and in its staff are engineers and technicians whose duty it will be to manage, operate, and coordinate the activities in the master and sub-control rooms. Also this section is to coordinate signal relays from the main station near Seoul to the transmitting site near Chechon. In addition, it is responsible for the installation, maintenance, repair and testing of all the equipment used for broadcasting.

A special office within the transmitting station is the transmitting station support office. It is responsible for the supply and management of all transmitting facilities and equipment coming in from abroad. Personnel assigned to this office are to manage the relay stations around South Korea as well to coordinate all TCOM affairs between the United States and Seoul. The TCOM station has 26 qualified engineers and technicians.

The KEDI IR programs have been broadcast by the Korean Broadcasting Service (KBS) until the completion of the KEDI studios. The first radio broadcast from KEDI was slated for March 1, 1975, however due to various problems and delays this broadcast did not occur until November 19, 1975 when KEDI's new radio studio went on the air for a 5 hour broadcast. Also on November 19, 1975 for the first time, a reasonably successful color TV signal of three to five minutes was conducted to test the microwave link from Seoul to the TCOM site and the retransmission of the signal to a color TV monitor in the KEDI studio. It seemed appropriate that the test was actually a color videotape of school children at a celebration for a historical holiday and festivities. The color broadcast was initially expected to occur on August 15, 1975. However, due to delays in construction and technical difficulties it did not occur until November 19, 1975. Additional technical information is presented in Appendix C, D, and E.

### ITV Script Writing and Evaluation

What appears to be a very effective process for the writing of scripts for ITV and their evaluation has been developed by KEDI staff. After a preliminary study of the lesson unit chosen to be taught through ITV programs, a layout for writing the script is developed by the script writer. Following a critical review of the layout by subject specialists, ITV specialists, the ITV producer, and the script writer cooperatively, appropriate modifications are made. The script is then written by the script writer and once again subjected to critical review by the same individuals. After a tryout utilizing students, the script is given its final revision prior to actual production.

Throughout the entire process special attention is given to instructional objectives, the techniques of teaching utilized in the script and in the production plan, the relationship of the ITV program to textbooks and workbooks, the integration of the ITV lesson in the ongoing study of the students, and the quality of skill of both the ITV teacher and the students used in the ITV broadcast.

A detailed outline of the process is found in Appendix F.

### Instructional Radio Programs

As mentioned previously, KEDI has had instructional radio programs on the air for the first and second semesters of 1975 through a cooperative arrangement with KBS, permitting use of their studios until those of KEDI are completed. In Appendix G is found a one-week schedule of instructional radio programs. This schedule coincides with a portion of the time of the team visit and was taken from the Teachers Guide to Instructional Radio Programs, Second Semester, 1975, a KEDI publication. The relationship between KEDI's current instructional radio programming and the E-M Project does not appear to be clearly defined at the present time.

## B. ITV AND IR IN THE E-M PROJECT

As mentioned earlier, KEDI's ITV and IR educational programs generally are to be found in the E-M Project and in special programs. Because of technical problems with the T-Com transmission system, KEDI employed alternative methods for its ITV and IR programs in the small scale tryouts. KBS, a commercial broadcasting company, was used to transmit the IR programs and a Sony one-half inch model portable VTR and monitor was used for the ITV programs.

All of the instructional and learning materials, both print and audiovisual for broadcasting, are developed by a five step process: (1) study of the unit, (2) analysis of the unit, (3) design of learning conditions, (4) preparation of materials, (5) evaluation of materials.

In the stage, study of the unit, the terminal objectives are identified and the content is defined. In the second stage, analysis of the unit, the learning elements such as facts, basic concepts, and principles are specified. The interrelationships of these learning elements are examined in order to identify the learning hierarchy. In the third stage, design of learning conditions, the instructional sequence is determined from the learning hierarchy. Instructional objectives are determined in accordance with the KEDI instructional model, and then the most appropriate media for instruction are selected. In the fourth stage, preparation of materials, the teacher guide, the student workbook, media materials, and other teaching-learning materials are prepared. In the final stage, evaluation of materials, an evaluation plan and instrument are developed and the process is tested with students to verify adequacy and instructional effectiveness.

### The Small Scale Tryouts

In Chapter III of this report, the results of the small scale tryouts and their educational effectiveness have already been described in some detail. Thus, only those outcomes specifically related to the use of ITV and IR are discussed in this chapter. However, it may be important for the reader to refer to the detailed statements in the previous chapter for clarification.

The First Small Scale Tryout. The instructional materials used in the first small scale tryout included ITV and IR. The ITV programs were designed to last 15-20 minutes each. The content to be covered and the orientation of the programs were discussed with subject matter specialists. The ITV script was written by the KEDI materials development team and then given to the ITV production department of KEDI. The staff of the ITV production department made whatever modifications in the scripts that were necessary and then produced the programs. Consultation occurred at every step with the subject matter content specialist. Upon completion of the ITV program, the accuracy of the ITV program and its appropriateness in terms of the psychological characteristics of the target students were evaluated by subject specialists and learning psychologists.

The ITV lessons on division and life cycle of plants were presented to the third grade students. Plain and space figures and light and color units were presented to the fifth grade students. In each instance the ITV science lessons were used as summarization activities, whereas ITV was the major instructional mode for the math lessons.

An analysis of the results appears to be inconclusive, even contradictory, as far as ITV is concerned. The achievement level of the

third grade students taught math via ITV is 63.61%, which is considerably below the 70.01% in overall student achievement. However the student achievement of the fifth grade students taught math via TV was 96.09%, considerably higher as compared to 92.08% overall achievement.

The Second Small Scale Tryout. The subjects included in this second small scale tryout were moral education, Korean language, and arithmetic. The ITV programs in moral education were developed to be used for dramatization. These units included a kind and generous policeman, and the importance of keeping accurate time. The ITV programs in arithmetic and Korean were developed as the main instructional program. Each TV program was designed to last for 15-20 minutes. Similar to the first small scale tryout, the accuracy of the program content and the appropriateness of the subject matter and its treatment in terms of the psychological characteristics of the target students were evaluated by both subject matter specialists and learning psychologists before the program for broadcast to the students.

While tests were conducted on the effectiveness of television, no data is presented revealing the level of effectiveness; however, results of all of the tests from the experimental group indicate that the new instructional materials as an aggregate are more effective in raising student achievement levels than the material used by the control group.

The Third Small Scale Tryout. As in the second small scale tryout, no data dealing specifically with ITV or IR are presented. Whether such data were collected is not clear. However, it is important to point out that in this third small scale tryout, both ITV and IR were used and the

timetable for each grade level was unified for ITV and IR programs in order to analyze the impact on the school schedule at large. Further, it is noted that the instructions relating to the broadcast media are the responsibility of teaching aides instead of teachers. This was done in order to assess the feasibility of using aides instead of teachers in the new educational system.

While the results from the third tryout appeared to be very favorable to the KEDI instructional system, there are some concerns relating to ITV and IR that must be addressed by KEDI. Teachers seem to lack an understanding of the new KEDI instructional system, particularly as their new role applies to the utilization of ITV and IR. Further, the limited quantity of ITV and IR sets was a handicap to the classroom teacher.

The Fourth Small Scale Tryout. Although this final small scale tryout had been completed at the time of the team visit to Korea, data concerning the outcomes were not yet available. The next interim report of the team will deal with this fourth tryout.

### C. ITV AND IR IN SPECIAL PROGRAMS

High School of Air and Correspondence. In March, 1974, a new educational operation called High School of the Air and Correspondence was introduced in Korea. Its major purpose was to provide secondary educational opportunities to the youth of the nation who were unable to receive high school education. Despite the rapid expansion of schools at all levels in Korea only approximately 30% of the high school age group actually go on to high school, and nearly 300,000 middle school graduates each year are not admitted to the secondary schools.

Among the existing high schools in Seoul and Pusan, eight high schools in Seoul and three in Pusan were chosen to start the High School of the Air and Correspondence programs in addition to their regular programs. Over 9,676 students registered for the new program. In 1975 the program expanded to 36 additional schools in major cities throughout the country.

The length of schooling for a person enrolled in the High School of the Air and Correspondence can be extended for up to 7 years from the date of admission. As the program covers all requirements of the regular high school curriculum the graduates of the High School of the Air and Correspondence receive the same rights and privileges of the regular graduate including the right of admission to colleges or universities after passing the qualifying exam for entrance.

The method of instruction employed by the High School of the Air and Correspondence includes self-directed study, radio instruction, school attendance every other Sunday, and examinations, testing, and

evaluation periods. Because radio and correspondence education relies so much on self-directed study, special textbooks have been prepared by KEDI in cooperation with subject matter content specialists and textbook writers. These textbooks are semi-programmed, with the non-traditional high school student in mind. Radio instruction is given daily, two lessons a day every morning, with each lesson about 15 minutes in length. The same lessons are then again repeated at night in order to give opportunity to those who missed them during the morning broadcast period.

The students come to designated school buildings every other Sunday and receive face to face instruction by the teacher for a total of 26 days per semester. The average Sunday session is 7 class periods of regular classroom instruction. This face to face instruction by the teacher is designed for content that is considered too difficult to be understood through self study or the radio lecture. The High School of the Air and Correspondence uses Sunday for its more formal classes since the existing high schools are vacant; and the students are generally employed during the week and have only Sundays free for school attendance.

As a part of the ongoing class assignments students are required to submit reports for correction and evaluation by their teachers. The papers are either delivered personally to the teacher during the Sunday classes or mailed directly.

KEDI's major role is to provide the textbooks, radio instruction, teacher training, coordination of the program administration, and administer the joint examinations. Each high school is responsible for classroom teaching, evaluation, maintenance of student records,

student counseling, and management of other matters necessary for the program. The radio programs and the printed matter for the High School of the Air and Correspondence are developed by KEDI by using college and university professors and high school teachers under subsidiary contracts to KEDI for this purpose. Appendix D presents a table showing the various subject matter content areas and the number of radio programs that are broadcast each semester.

One of the major problems facing KEDI in relation to the High School of the Air and Correspondence is the high attrition rate. Current figures indicate that more than 35% of the enrollees during the first semester do not enroll the second semester. The attrition rate is higher among male students than among female students. It has been suggested that the difference is due to economic factors. It is hoped, since present regulations permit a student to extend his study up to seven years, that some of those who dropped out early will return when their situation permits.

Currently the radio programs for High School of the Air and Correspondence are being broadcast through KBS facilities. Upon completion of KEDI's radio studio facilities, these broadcasts will originate at KEDI. The current air and correspondence educational programs will be also strengthened when KEDI's television facilities are ready to offer television instruction in addition to radio.

Sinahn County Broadcasting System. The county of Sinahn consists of 773 islands, of which some are habitable and some are not. The schools are widely scattered with no interactions effectively maintained among them. The geographical feature of the area poses many

educational problems, among them limited opportunities for social and cultural contacts, low quality of teacher preparation, and the difficulty of providing supervisory guides and administrative supports.

KEDI's major objectives in this special program for which it has responsibility are:

1. To maximize the outcomes of instructional/learning activities through the utilization of modern technological advances,
2. To provide up-to-date information on educational innovation and to help the teachers improve their professional competencies,
3. To help administrators and supervisors establish relevant policies and guides,
4. To expand the opportunity for social education designed for the out of school youth and adults.

While this project was initiated on an experimental basis KEDI is presently programming over 40% of the broadcasts and it is anticipated that the program will become permanent in the not too distant future.

There are four basic areas in which broadcasts occur: (1) broadcasting for learning, (2) in-service teacher training, (3) programs for administrators, (4) general programs for regional community involvement. The programs for learning include introduction to the broadcast program, moral education, national language, social studies, national history, music, science, English, and the children's hour. The in-service teacher training program is to facilitate self learning

by the teacher, designed to improve professional competency by providing updated information on learning theory, teaching methods, and innovative efforts. The educational program for administrators is designed to simplify and expedite the process of administrative work. It provides information on administrative work load and educational events. The broadcast program for regional community involvement is concerned with social education of the out-of-school young people and adults. The effort here is an attempt to combine the social functions of education with the educational functions of society thus developing industry and mutual assistance and cooperative attitudes which are essential to the development of a regional community. Specific broadcasts deal with new community education, how to increase income, and how to improve the quality of living.

While there are technical problems related to equipment and professional problems related to the quality of the specialists engaged in program production, the educational effects of the broadcasting system in Sinahn County have received growing support for their potential contribution to increasing learning outcomes among the people on the islands. It is anticipated that KEDI's direct involvement with the Sinahn Broadcasting System will be a permanent one.

In-service Teacher Training. In-service teacher training is in great demand in Korea at the present. With the rapid change in educational theories and teaching techniques, it goes without saying that the existing teacher in-service training program is inadequate to bring the teachers up-to-date on the new changes. So that teachers can keep abreast of new educational theories and practices, the new in-service

teacher training program attempts to provide a variety of educational programs utilizing the uniquenesses and merits of the broadcasting media.

Social Education. KEDI's role in ITV and IR in the New Community Movement has yet to be established. The educational broadcasting system has a great potential for extending social education and its function in this area.

Non-Formal Education. It is envisioned that KEDI will be involved with various high quality programs that are designed along non-formal and non-traditional education lines. This may involve programs for pre-school age children, youth not currently enrolled in school, and adults.

#### D. COMMENT

KEDI has assumed a prominent role in the use of television and radio for instructional purposes. On the staff are highly capable professionals with the technical and educational competences necessary for leadership responsibilities in the improvement of education in Korea. Both the KEDI administration and staff are devoting considerable time and effort to the task.

However, in view of the fact that ITV and IR play such a prominent part in the new instructional system planned for the schools, it is important that even greater attention be given to a number of concerns relating to the instructional media. The following comments would appear to be relevant to these concerns.

1. A careful and intensive research effort relating to the effect of ITV and IR on the new instructional system developed by KEDI would appear to be an imperative. Perhaps this task should be specifically assigned to a single researcher as a major task.
2. Increasing attention should be given to the inter-relationships among script writers, the technical staff, and the curriculum specialists. Closer communication among the three is most important to assure appropriate planning and development. For example, animation costs may be prohibitive. Yet curriculum specialists, unaware of the financial implications, may be calling for animation in an effort to make instruction more effective.

3. A continuing concern is the development of improved external relationships, particularly those relationships that may be most useful in ITV and IR. Especially important are relationships with similar radio and television efforts at Seoul National University, Ewha Women's University, Yonsei University's A.V. Center, and even KBS and MBC.
4. Special attention should be given to the problems that may arise from differing time schedules in the schools of Korea. Since all schools do not follow the same time schedule in respect to curricular offering, ITV and IR broadcasts may not coincide appropriately with school schedules and thus may create difficult instructional problems. Similar experiences in other countries, including the United States, point to the difficulties that result from inflexible public school scheduling.
5. KEDI's current ITV and IR facilities are for broadcast purposes and are generally bound to studio type programming. They do not lend themselves to portability or transportation or field type hardware that can make on-site recordings in order to make broadcast programs more realistic. This may be done with 1/2" portable systems or super 8 mm film or possibly a mobile van.
6. Also of concern is the level of professional preparation and training that is expected of the classroom teacher participating with ITV and IR programs. It appears that more concentrated

effort should be given to in-service education activities for classroom teachers. To many of them ITV and IR are new techniques and innovations that they are not familiar with.

7. Of concern also is relevant, worthwhile "hands on" experience for the training of KEDI's engineers and technicians. A way must be provided to train KEDI's staff in English if KEDI staff are to come to the United States or Great Britain or Australia for study. While there are very good technical installations available for training, a large portion of the available training goes untapped if the persons undergoing training do not understand the language of instruction at the training site.
8. In addition to training programs for technical staff, advanced training would be most useful to be producers, directors and script writers.
9. Because of the heavy involvement with ITV and IR programs, it would appear necessary to develop more explicit and objective criteria against which determinations can be made as to the kinds or subject matter areas of learning materials that best can be taught by television and radio. It may in fact be true that not all subject matter content lends itself equally well to presentation by television and radio.
10. There appears to have been a tendency for the script writers for both television and radio programs to rely a bit too much on textbooks and reference books in writing scripts.

An effort should be made to write natural and interesting television and radio program scripts. It may be possible to enhance the television programs also by on-site recordings and the use of professional actors and actresses.

#### A. NEW LINKAGES AND NEW TASKS

Although the primary-middle school project provided the impetus and the funding to establish KEDI, it soon became obvious to the leadership of KEDI that a viable national research and development institution could not long exist if it depended only on a five-year project. Also, the terms of the agreement with AID for financial support made it clear that the institution was expected to develop a continuing, long-term program of educational research and development activities which would continue beyond the first five-year period.

KEDI appropriately has established enabling linkages with the Ministry of Education, the Economic Planning Board, and various financing agencies including USAID, UNEPA, UNESCO, UNDP, and others; functional linkages with faculties of education, teacher-training colleges, provincial school boards, schools, and other research institutes such as KIRBS; diffusion linkages with various publications, the mass media, and with professional audiences through their own publications; and a number of normative linkages with professional organizations such as the Korean Society for the Study of Education and various teachers' groups, and with a number of academic organizations and universities in general through the use of their personnel as study consultants, contractors, and members of study commissions.

Central to the expanding role of KEDI has been what was known in late 1975 as the Bureau of Policy Research, which attempts to identify

critical priorities in educational development as represented in the national planning documents and as identified by the Ministry of Education. To the extent that KEDI can attract resources, this bureau examines critical educational issues and problems and publishes studies to assist policy makers, planners, and operational staff throughout the educational system. This bureau also initiates certain pilot activities to demonstrate possible approaches to the solution of critical problems related to pre-vocational training at the middle-school level, pre-service and in-service teacher education, and the extension of secondary education opportunities to those who cannot attend school.

External relations, on the other hand, are handled primarily through the Office of Planning and Coordination, although there is a close collaboration between this office and the Bureau of Policy Research in areas where policy studies imply collaboration with other organizations. The Office of Planning and Coordination also manages the publication and the coordination of periodicals and of other dissemination activities.

This section deals first with the activities of the Bureau of Policy Research and second with the external relations and publications activities of the Office of Planning and Coordination. Also discussed are population education activities, handled by KEDI's Committee of Curriculum Development. The Committee is a unit similar to a Bureau but is limited at the moment to the creation of population education materials. However, it may in the future take on other specialized curriculum development tasks.

## B. BUREAU OF POLICY RESEARCH

### Policy Studies

A pattern seems to be developing in the Korean government through which several key ministries establish a policy research arm to assist in policy studies and research and development activities. The Ministry of Science and Technology works primarily with the Korean Institute for Science and Technology in the conduct of such activities, the Economic Planning Board uses the Korean Development Institute, and, increasingly, the Ministry of Education is turning to KEDI.

As is the case with these organizations, KEDI conducts in-house studies and contracts with other organizations for research studies and program development. It further attempts to coordinate the various policy areas.

Studies and projects undertaken by the Bureau of Policy Research show a close linkage with priorities established by the government in national planning documents and policy statements. The draft guidelines for the fourth five-year economic development plan, issued in June 1975 by the Economic Planning Board, and elaborated in a confidential ("not to be quoted") discussion paper issued also in June 1975 by the Korean Development Institute clearly show the concern of the government for stress on technical and vocational preparation, on community development and non-formal education, on population education, and on finding ways to reduce the cost burden of education to parents. Similarly, statements by the President of the Republic have pointed to the need to conceive a Korean education uniquely suited to the culture of Korea. It is around these concerns that the Bureau of Policy Research has initiated its work.

As yet, it is not clear what the influence of KEDI policy studies may be in shaping the national plan. The current five-year plan is being developed by 22 working committees scattered throughout the sectors, including several inter-sectoral committees in education, population, manpower, and other areas. Each sector has an overall coordinating committee. KEDI representatives appear to be affiliated with a number of the more significant working committees, and KEDI information and data undoubtedly have some impact though the extent of it is difficult to trace at the present time.

#### Historical and Philosophical Foundations

The Bureau of Educational Policy Research appropriately began its activities with a seminar on educational goals which was designed to involve a broad range of interested persons in Korea, including some who were skeptical of the establishment of KEDI in the first place. A report on the seminar was published in early 1973, and the Bureau has now completed a follow-up study on applying Korean educational goals in the school classroom. The latter study was in press as of November 1975.

A study of the historical foundations of the Charter of National Education and another on defining a desirable image of the Korean people were done in 1973-74 and reports were published. Now in process is a study on thoughts on human dignity.

The National Education Charter was proclaimed on December 5, 1968. Since that time, the government has progressively introduced innovations to create a new Korean education system uniquely suited to the needs of the country. KEDI, appropriately, has taken leadership in bringing together individuals from professional and academic organizations, the

political arena, and the schools to focus attention on the policies enumerated in the National Charter. Future efforts might well focus on concrete measures necessary to implement these policies.

It is difficult to assess the long-term effects of these kinds of studies. On the one hand, one can assume that it is good for KEDI as an institution to involve people outside KEDI in these kinds of studies. On the other hand, the results are published in relatively small editions (usually around 500 copies) and with publication the study is considered completed. A question can be raised concerning the extent to which even the KEDI staff members and other units dedicated to the development of elementary and middle-school teaching materials are well-acquainted with the results of these studies and, in fact, make a conscious attempt to translate some of these notions into teaching content and methods. At the very least, however, such studies perform a very important latent function of establishing KEDI as an institution concerned not only with educational technology or efficiency, but also with the broader issues of quality, ideals, direction, and desirable images of Koreans.

#### Teacher Education

It is not surprising that a major responsibility of the Bureau of Policy Research relates to teacher education. KEDI, with a major concern for the improvement of education at all levels, recognizes the critical role that effective teaching plays in educational reform and in the improvement of the quality of education. Thus, it is important that KEDI as an institution be involved in research and policy studies aimed at the improvement of both pre-service and in-service teacher education.

At the present time four studies have been completed and published. Two were undertaken on the initiative of KEDI administration and staff. One of these is a comprehensive survey of the literature relating to teachers and teaching in Korea. The other is a study of the status and the problems of elementary teacher education in the junior teachers colleges. Two additional studies were undertaken at the request of the Ministry of Education to strengthen its efforts directed toward the improvement of teacher education. One dealt with the development of a model for in-service education and the other was concerned with the improvement of the pre-service system of teacher education.

The study directed toward the development of an improved model for in-service education of primary and middle-school teachers made a complete and comprehensive investigation of the problems of the present system of in-service education. It was found that specifications of the in-service programs for different educational positions were vague, outdated and outmoded. On the basis of these findings and of the competencies required for different professional responsibilities, new guidelines were developed. Specific program content was developed for elementary-school teachers and middle-school teachers, for principals, and vice-principals. New emphasis was placed on developing programs with appropriate sequence and continuity. Appropriate time allocations were devised to include three areas of study-- professional, general, and major academic fields of study.

The report on the improvement of in-service education was submitted to the Ministry of Education which encouraged a follow-up study. It is anticipated that all teachers, over a period of time, will have the opportunity to participate in the new program which will be used not only to upgrade the quality of teaching but also for purposes of promotion in teaching ranks and to administrative positions.

The second study undertaken at the request of the Ministry of Education was focused on the improvement of elementary teacher education. General recommendations of the study include an extension of the present two-year post-secondary program to one that is three to five years in length, an improvement of the program for practice teaching and internship teaching, development of a statement of qualifications for entrance into the teaching profession, an integration of pre-service and in-service education, a control of teacher supply and demand, and a program that has validity in terms of the present situation in Korea. This study had just been completed in late 1975 and was under study by the Ministry of Education.

In addition to research and policy studies, various projects in which the Bureau of Policy Research is involved provided an opportunity for a practical application of certain of the recommendations of the in-service education study. In-service education programs have been conducted for both the instructional staff of the High School of Air and Correspondence and for resource personnel involved in population education teacher training.

The program for the instructional staff of the High School of Air and Correspondence involved a carefully planned manual to be used by instructional staff, a one-day orientation for principals and teachers, and the use of programmed study materials and instructional radio.

The in-service program for teacher trainers in the population education program was more complete and comprehensive and included a three-to five-day program plus instructional materials and a carefully detailed workbook and teachers guide.

Other in-service education activities undertaken at the request of the Ministry of Education included a program of school management training for school principals, a program of lectures and workshops for 9,000 teachers in Seoul and Pusan in both professional and academic subjects.

As the Bureau looks ahead and reviews its role in in-service teacher education, a number of plans are emerging: closer liaison with the teacher-education programs of the E-M Project, development of closer relationships with junior teachers colleges and colleges and departments of education in universities, cooperative planning with teacher educators relative to the development of new approaches to in-service and pre-service teacher education related to KEDI instructional systems and materials, continuation of close working relationships with Ministry of Education, and greater emphasis on basic research in teacher education.

Any evaluation of the efforts of the Bureau in the field of teacher education must be positive. Studies that have been undertaken are relevant to Korean education problems and have the marks of quality research. Actual in-service education efforts have been completed successfully. Plans for the future are clear and represent significant efforts important to the role of KEDI. Relationships with the Ministry of Education are excellent and have resulted in increased contractual projects for KEDI. However, here as elsewhere in KEDI, there are basic problems relating to material and human resources. What is remarkable is the amount and the quality of accomplishments not only in teacher education but in a number of other areas with a limited number of staff. If the Bureau is to maintain its quality efforts and indeed, if it is to improve the quality of its accomplishments, it is necessary that additional funds be obtained that will permit the employment of additional qualified staff. If added funds are not available, then it would appear important to review the mission of the Bureau, to determine priorities, and to make allocations of funds and personnel to a limited number of activities in order to assure top-quality performance.

### Community Education

One of the government's key goals since the early 1970's has been to revitalize rural development, in large part through the Saemaul Undong or the New Village Movement. To attain the objectives of the Movement, virtually all government ministries and departments have undertaken a variety of educational, community-action, and community-development related activities. The Movement was launched as a full-scale national effort in 1971, after a smaller pilot effort in 1970.

In the education sector, the Movement is seen as related to the community schools' activities begun in the early 1950's. Now, however, all rural schools are to become more active through the conduct of community-development projects, in-school study of the goals of the Movement, and cooperation with activities of other ministries and departments.

The basic ideas of the program, as described by the President of the Republic, are as follows:

1. The New Village Movement is a drive for better living.
2. It is a movement for spiritual enlightenment.
3. It is a movement for taking action.
4. It is a movement to encourage new social discipline fostered by autonomous change of social injustice resulting in a new national concept of social welfare.

The Movement sees as its goals the utilization of all land, the utilization of all labor force in productive activity, and the improvement of agriculture by making all farmers technocrats. It further sees a better balance in living standards between urban and rural populations. All strata of society, rural and urban, are being encouraged to participate in community development activities.

The early stages of the Movement may have been less than fully successful because of limited stress on improved productivity and income for rural villages (total stress was on spiritual enlightenment and self-help without sufficient outside investment in infrastructure to assist in increased productivity). In 1974, only two percent of the government's budget and six percent of its investment budget was invested in New Community Movement activities. These shortcomings have been taken into account in current action of the various ministries, and budget allocations will likely increase.

As the primary educational research and development center of the country, KEDI early recognized the need for policy studies concerning the present and possible future roles of the education sector in the New Village Movement. These studies took a logical progression, beginning with a study on the theory and practice of new community education, followed by a questionnaire study of principals, teachers, and administrators in 29 primary schools and 28 high schools to find the actual state of new community education activities as of late 1972 and early 1973. Also examined were the social and psychological variables of the school and community as they relate to practice within community education. These analyses were for the purpose of determining the problems of new community-education activities as faced by teachers.

These studies showed that primary school facilities are more often open to the community than high-school facilities; that these facilities are most often used for athletic meetings or activities, and for motion picture shows, displays, and exhibits. In only 25 percent of the cases reported were school facilities used for social-interaction activities, suggesting the need for more events of this nature.

Rural schools hosted more athletic and display meetings than urban schools, and primary schools hosted more athletic, social, and motion picture meetings than high schools. Attendance at these activities was mostly by mothers of students (47 percent) and women and girls in the village in the vicinity of the schools (48 percent).

A variety of adult, non-formal education activities were in progress at some of the schools surveyed. Fifty-seven percent of these activities stressed the need for simplified family ritual standards (marriage, funeral, and other types of community rituals are considered too complex and costly in Korea); 34 percent of the activities dealt with family planning; 32 percent with housekeeping; 32 percent with sanitation and hygiene; 30 percent with vocational skills; 35 percent with recreation; and 21 percent with child-rearing and guidance. Obviously, a number of activities dealt with several of these areas at the same time. Urban primary schools spent more time in these activities than rural schools but urban high schools spent less time than rural high schools. Only 16 percent of non-formal education activities identified dealt with professional knowledge such as animal breeding and agricultural technology.

One of the goals of the new community movement suggests that students should be involved in public-service activities. The average number of hours per year in which students participated in such activities was 42.5. High school students served twice the time in such activities as compared to primary students. Most of the community activities of students involved cleaning of streets; installing door plates, national flag boxes, flag-hoisting stands; and providing books for the village library and articles of comfort for soldiers and policemen.

These studies also found that there were some community data used in teaching in the schools, although this was minimal.

There was little significant difference found in social and psychological variables as they relate to the activities, except that older principals seemed to encourage more activities than the younger school principals. The more community education courses the teachers had attended, the better their attitudes. The characteristics of the community seemed to have little effect on activities. Teachers reported a good deal of lack of understanding of how to go about community education activities, and principals reported budgetary problems in implementing activities.

Recommendations coming out of this study suggest greater cooperative activities by all concerned in order to help school personnel understand what community education is all about. They also suggest that efforts should be planned to attain substantial community development effect as opposed to highly visible projects with little effect. More training of teachers and principals and better collaboration between schools and other agencies were encouraged.

Another study was undertaken in 1974 (published in December of that year) to develop more specific strategies for implementation of new community education programs. The model provided in the report was checked for validity through conferences with school inspectors and teachers in three areas: a large city, a smaller city, and rural areas.

The report begins with a conceptualization of new community education and relates it to earlier movements and events, including: the Community School Movement of the 1950's and early 1960's, the Charter of National Education, National Defense Education, the October Revitalization and

others. The overall educational goal of New Community Movement was agreed to be the intentional modification of behavior of students and of people necessary for the development of the community and of the nation as a whole.

The strategies document outlines the tasks, objectives, and criteria for development of content, methods, application, and evaluation procedures appropriate in the schools in order to contribute effectively to the overall goals.

Seven major categories of action are recommended in the schools:

1. Classroom structural changes
2. Improved guidance in school life
3. More meaningful public-service activities
4. More meaningful educational activities for productivity
5. More emphasis on non-formal education within the school
6. More extensive opening of school facilities and events to the community
7. Better school support of village development through involvement of teachers and students in development activities

As of November 1975, two additional studies were underway. One was of rural non-formal education as related to the New Community Movement, and the second was a study on the development of educational materials in rural non-formal education.

So far, KEDI activities in community education have been largely limited in policy studies. However, KEDI initiated in 1974 a program of collaboration with the German-funded Centre for Production and Training

for Adult Education and Television (CEPTA TV) in Singapore (Dr. Christian Grote, Director), which includes training of KEDI staff and pilot production of television documentary and educational films. These films grew in part out of the community education training needs identified in KEDI studies and concentrate on farm skills, farmer motivation, nutrition related areas. Training activities in collaboration with CEPTA TV are discussed later in this section under the Office of Planning and Coordination.

This film-production program and other KEDI activities in community development raise the question of the effectiveness of KEDI relationships with other governmental departments involved in the New Community Movement. For instance, the Ministry of Agriculture is providing technical education for rural youth and farmers, the Ministry of Home Affairs is training New Community Movement leaders, the Ministry of Agriculture is doing films on rural development organization. These activities, of the moment, are coordinated by the Ministry of Home Affairs which chairs an inter-Ministerial committee, with Vice-Ministers in other Ministries participating. It would appear that there is also a need for a sub-committee to look at the possible areas of collaboration in formal and non-formal education and training.

#### Industrial Arts, Vocational, and Technical Education

KEDI's concern for industrial arts, vocational and technical education clearly matches an increasing government concern that elementary, middle, secondary, and higher education is generally too academic and without sufficient orientation for preparing skilled manpower needed at all levels, and especially at middle levels. Educational planning and

expansion efforts in the past could be characterized by the social-demand approach. This and the government compulsory education policy have resulted in a system which currently enrolls nearly all school-age children in elementary school. Seventy-five percent of those finishing elementary go on to middle school, and 68 to 70 percent of those finishing middle school go on to secondary school. One out of five secondary school graduates continues on to the university.

The lack of effective skills training programs in secondary education, the emphasis in secondary curriculum on preparation of students to pass university entrance exams, and the emphasis in universities on liberal arts have combined to produce a situation of considerable concern to government planners. At least half of the high-school graduates who qualify for university cannot enter because of limited capacity and yet are not trained for any occupation. The universities are producing more than enough high-level manpower in most areas so that if they do not expand at all there will be sufficient supply until the early 1980's. On the other hand, there is a critical shortage of middle-level manpower, especially for heavy and chemical industries to be developed in the new five year plan.

In order to deal with these problems, the President of Korea, in March 1973, initiated a basic-skills honor system as a means of broadening the base for skilled manpower. In October 1973, the Ministry of Science and Technology (MOST) assigned implementation studies on the basic-skills honor system to the Korean Commission on International Vocational Training, and in December 1973 KEDI began a pilot project to

develop an instructional model for basic-skills training at the middle school level.

This model has since been implemented through the development of 81 skills-training pilot modules, incorporating skills-training worksheets, 8-millimeter single-concept films, and teacher-training materials. The model and materials have been field tested in several middle schools, and further curriculum studies were started in January 1975 to develop a suggested content for industrial arts education and homemaking for middle-school students. Finally, in March 1975, KEDI initiated a nine month survey of practices of industrial arts education in the middle schools and issued a report suggesting needed revision in curriculum and facilities in order to make possible the full implementation of a basic skills honor system at the middle-school level. A December 1974 KEDI study which suggested the standardization of facilities and tools for the basic-skill honors system programs at the middle-school level provided additional input for the final model.

The current pilot teaching materials include nine 16-millimeter demonstration films, 30 film loops on specific skills, three teachers' guides (metalworking, woodworking, electricity, and electronics), nine student workbooks, and 30 operation sheets and checklists. The materials are sufficient for a three-year middle school course in industrial arts, including some home economics materials. Estimates are that it would take about 4,800 million Won or about US\$ 9 million to disseminate the industrial arts materials to all schools nationwide and perhaps the same amount of money to develop a three-year program in home economics. The total effort would include projectors for the film materials and some equipment for

shops so that the students would have the tools necessary to practice the skills demonstrated in the materials. Furthermore, although a variety of technical school teachers and professors of technical colleges have participated in the preparation of the materials, there has been no attempt at extensive teacher training beyond the locations where the materials have been tested, and thus some of the estimated cost would be involved in in-service training of teachers.

Accordingly, KEDI has proposed a major five-year project, to begin in January 1977, for the development and diffusion of Individually Assessed Skills Instructional Systems for the Improvement of Technical Education in the Korean Middle Schools. The total cost of the proposed project would include a government contribution of \$1,308,500 with a UNDP contribution of \$1,186,365. The Project would establish a system for the continuous examination of existing curriculum and texts, teacher training and instructional-materials revision, supply of equipment, tools, and facilities on a standardized basis to rural middle schools, and the dissemination of the various teaching materials developed to 2,000 middle schools, after tryout in 20 middle schools. The project would begin in January of 1977 and run through 1981. Although most of the industrial arts materials have been prepared, a similar series would be prepared for the home-economics curriculum, including skills training for women.

As of November 1975, it was not clear whether or not this proposal would obtain the necessary support from the government planning agencies responsible for allocations of UNDP funds and for approval of development projects. The Education Sector Plan for 1976-81 was at that time under preparation with various sub-committees looking at employment, manpower,

science, and technical education problems, all coordinated by a planner in the Ministry of Science and Technology.

Fourteen investment division chiefs in the economic planning board plus participants from the Ministry of Education, the Office of Labor, the Korean Institute of Science and Technology (KIST), the Korean Advanced Institute of Science (KAIS), the Korean Science and Technical Information Center, Korean Development Institute, Seoul National University, and others participate in the various educational planning exercises. Various working committees report to a coordinating committee who in turn report to a deliberations committee council before decisions are made. Further complicating the situation is the fact of a recent World Bank loan of \$70 million to improve vocational, agricultural, and technical high schools. In this Bank loan there is no money for middle school pre-vocational and skills training activities, and there is some feeling in the Ministry of Education that the major secondary education level effort may be sufficient and that no additional funds can be allocated for an effort at the middle school level.

According to MOST, 1.8 million workers at the middle-skills level will be needed to support the chemical and heavy industries during the period from 1976 to 1981. Of these, 840,000, or about 47 percent, are to be prepared in secondary technical-vocational or agricultural schools and the rest are to be trained in public and private vocational training centers including those sponsored by the Office of Labor. The need to introduce pre-vocational skills training in the middle schools to relate to this secondary effort seems not to be fully recognized at policy levels of the government. The ability of KEDI to gain policy acceptance of its

general technical education program for the Korean middle schools will be a real test of its effectiveness in collaborating with the policy and planning groups in the various other areas involved in decision making in this area.

In visits with the Bureau of Science Education in the Ministry of Education, it was noted that there existed good conceptual support of the KEDI project in collaboration with the Ministry in testing out the KEDI materials in four experimental schools, with three hours of skills training per week in these schools. If a serious effort is intended, it would appear that more than three hours per week at the middle school level should be devoted to such skills training. Furthermore, it was noted that the Bureau of Science Education indicates that there is no counterpart money for the new United Nations Development Program proposal and that the emphasis would be on high school skills training in the future of education.

It was also noted that the Ministry of Education collaborates with UNICEF which provides expert assistance and equipment and materials for science education centers attached to 11 junior teacher colleges, some support for science teacher training at the national universities, some help for curriculum studies for junior teachers colleges, and some training for professors of science and mathematics. There appears to be little coordination between the KEDI activities and UNICEF activities. Perhaps KEDI should undertake some discussions concerning how these activities might be mutually supportive.

Some technical and vocational training problems are being dealt with outside the formal school system. The Office of Labor, under the Occupational Training Act, has a variety of training programs which are designed

to prepare a total of 37,000 workers during 1975, in part through recruitment of high school graduates who do not continue to the university and in part through on-the-job training. In addition, there are technical high schools and technical institutes at the university level, and there are various proposals for encouraging students to enter these schools. One proposal suggests that graduates of these schools receive preferential treatment when applying for jobs and promotions.

KEDI might well take the leadership in an inter-ministerial planning exercise to examine how these various activities can better complement one another.

#### Population Education

Population education programs are not in fact under the Bureau of Policy Research of KEDI. Demonstration materials are being developed by the Committee of Curriculum Development, a Bureau-level group assigned to specialized curriculum development tasks. The Unit of Strategic Planning for Innovation Diffusion of the Office of Planning and Coordination is involved in the testing of the materials. However, the Director of the Bureau of Policy and Research is also the Director of the Population Education Project of the Ministry of Education under which KEDI's population education activities are performed.

Korea has had an active national family planning effort since 1962. Although these programs met with reasonable success, the Government felt that a national population education effort of a more intensive nature was needed to help reach the norm of a small family in Korea, and in 1973 it submitted a project to the United Nations Development Program which was funded to begin in March 1974 and to run through 1977. The UNDP contri-

tribution amounted to \$1,176,940 and the counterpart government contribution was to be slightly above 400 million Won (approximately \$800,000).

In the period from 1955 to 1960, it is estimated that there was a population growth of slightly less than three percent per year in Korea. This has gradually dropped until the population growth for the period 1970-75 was estimated at about 1.7 percent, even though mortality rates had declined at the same time. Birth rates were at the level of about 15 to 17 per thousand in 1955 and had dropped to about 8.2 per thousand in 1975. However, with continuous migration to urban centers, and with more women entering the labor force, new population each year available for employment is currently estimated at 2.8 percent. With virtually all arable land under production in Korea, with technological processes in agriculture increasingly being used, and with increasing numbers of secondary school graduates and university graduates unemployed, the government feels that there must be a continuing effort to establish a small family as the national norm.

The government also feels that there need to be new programs to encourage the training and employment of women, although these policies seem not to have affected dramatically the curriculum in the schools yet.

The MOE Population Education Project, begun in 1974, enjoys the support of the United Nations Fund for Population Activities. The current project is nationwide and involves universities, junior teacher colleges, provincial in-service training centers, secondary schools, and elementary schools. The Central Office for Population Education Programs has been established in the Ministry of Education under the direction of the Vice-Minister and directed by a Chief Executive Officer who is also the Director of the Bureau of Policy Research at KEDI.

The project includes four major activities, all done under contract, with the exception of the general evaluation function which is done by the Central Office with the help of consultants. These activities are: (1) curriculum and materials development for the schools, (2) training of personnel in population education, (3) development of demonstration college programs in population education, and (4) research.

KEDI has received the sub-contract from the Ministry for the development of the curriculum and materials and for some research activities. Various colleges and universities have received contracts for the training of teachers, principals, and supervisors; and other universities and organizations have received contracts for research activities on teacher knowledge and attitude, effects of instruction and environment on children's acquisition of attitudes, and other relevant concerns.

KEDI has recruited three professors to work part-time in the curriculum studies, one of these professors specializing in social studies, a second in environmental studies, and a third in fertility psychology. Materials being developed follow the Elementary-Middle School Project design, though they are not integrated into the Elementary-Middle School Project.

Materials are based on a preliminary study done by KEDI suggesting general guidelines for population education. A second more specific study suggests population units appropriate for fourth, fifth, and sixth grades; the first, second, and third year of middle school; and the first, second, and third year of high school. Also this study suggests areas of the curriculum where population and family life education should be infused into the regular curriculum (as opposed to the introduction of new units). For instance, in social studies and science, new units are suggested; in

mathematics, a number of suggestions are made by grade level as to where population material can be infused into the regular curriculum.

This second curriculum study has resulted in a series of remarkable charts which offer concrete suggestions for the introduction of population education materials in all the grades for elementary through high school. However, this manual has not as yet been used by the Elementary-Middle School Project in its work. It is, however, being used by the Textbook Compilation Bureau in the Ministry of Education, and it is likely that more population education materials will be in the new curriculum at all levels as it is developed by the Ministry.

The experimental units that are being developed are being tried out in 11 elementary schools and 11 middle schools. These are not the schools which are used for demonstration purposes in the E-M Project. High school materials for the program have not yet been completed.

All research and pilot materials are expected to be finished and validated by 1977. A new elementary and new middle school curriculum will be prepared by the Ministry of Education for 1977 or 1978 (curricula are revised in ten-year cycles). At that time, it will be decided whether or not to include some or all of the population education materials now being developed in a nationwide program.

KEDI's involvement in population education activities clearly show KEDI's appropriate response to national development priorities and its flexibility in structuring itself to undertake the necessary applied studies and to prepare and validate curriculum materials for the pilot operations. As with the industrial arts pilot materials, however, it also demonstrates that KEDI is not in full control of all of the factors which will affect possible dissemination and use of these materials, and

it remains to be seen if KEDI can convince policy makers and planners in the Ministry of Education and in other related ministries and departments of the need to allocate resources necessary for such dissemination.

Part of the problem, of course, is that operational funds are located in the Ministry of Education and that the Ministry's Textbook Compilation Department makes curriculum decisions. Several assumptions are possible. One might be that it is appropriate for KEDI to take on the demonstration, research, and development projects in various curriculum areas, with no assurance that these materials will ever be used. Those that are demonstrated to be especially effective and which can then capture enough interest to merit the investment needed for wide dissemination will be accepted by the authorities. Another assumption might be that KEDI should be assured by the Ministry of Education of the funds necessary for dissemination of curriculum materials that KEDI is assigned to develop.

The role and nature of KEDI in decision-making processes surrounding curriculum development, revision, and mass dissemination will undoubtedly change as KEDI firmly develops its prestige and its credibility. Its role in such matters, as perceived by KEDI and by the other organizations with which it interrelates, will be a critical factor in determining KEDI's future.

Finally, the population education project and the industrial arts projects amply demonstrate a possible internal problem in KEDI. There seems to be little lateral inter-penetration between projects. The Elementary-Middle School Project makes little or no use of the very detailed population education curriculum study which includes suggestions as to how population education can be integrated and infused into other

curriculum areas. Similarly, the pilot materials developed under the Industrial Arts Projects are as yet not used in the Elementary-Middle School Project. This is justified on the basis that these projects are pilots and not yet accepted by the textbook compilation units in the Ministry of Education as part of the approved curriculum. If, however, KEDI is to have an on-going comprehensive program of curriculum development, it must have some authority to modify incrementally the curriculum as it proceeds to develop its program year by year. As it is, the Elementary-Middle School Project will complete all of its materials before the Ministry of Education reacts to the population and industrial arts education materials through its Textbook Compilation Department, and, if these materials are accepted, then KEDI's elementary and middle school materials may already be out-of-date.

In essence, curriculum research at the elementary and middle school levels should be a continuous on-going process, not something that starts and stops every five or ten years.

#### High School of the Air and Correspondence

In recent years, the Ministry of Education eliminated the Middle School Entrance Examination, resulting in a dramatic increase in middle school enrollment. This in turn increased the output of the middle schools. Existing high schools have not been able to expand rapidly enough to admit all of the aspiring entrants. This has created a substantial juvenile unemployment problem. The KEDI Middle School Skills Training Project has been designed in part to help remedy this problem, the idea being that if middle schools increase their skills training, middle school graduates will at least have some pre-vocational training to assist them in getting a job.

Another approach to provide further training for middle school graduates who are not able to enter high school is the High School of the Air and Correspondence, initiated in 1974 under the general auspices of the Social Education Department of the Ministry of Education. The High School of the Air and Correspondence builds on experience gained by this department through its earlier Junior College of the Air and Correspondence, begun in 1972. In addition to unemployed middle school graduates, a number of employed Koreans have not completed high school and are able to pursue high school programs through the High School of the Air and Correspondence broadcasts and home study materials.

The Ministry of Education contracted with KEDI to produce the High School of the Air and Correspondence course texts and radio programs and to evaluate achievements of students. Forty-two academic high schools throughout the country collaborate in the program by providing local supervision and face-to-face activity in conjunction with the broadcasts. These schools are designated by provincial boards of education. The Social Education Department of the Ministry contracts also for the printing and distribution of the text materials and provides a royalty to KEDI. The curriculum is that of the academic high school, and thus there is little skills training involved in the course of study

Enrollment is limited to those age 45 or less, and both KEDI and the Ministry of Education are concerned that the program is not well enough known. The broadcasts are via Korean Broadcasting Station (KBS), Munwha Broadcasting Company (MBC), and Christian Broadcasting Station (CBS). KEDI has a number of coordinating committees to write the broadcasts in each discipline.

As with some of the other special projects of KEDI, described above, there is little inter-penetration of the rest of KEDI's work with the High

School of the Air and Correspondence activity. None of the population education materials, for instance, are used in the project and there is little attempt to extend the skills training activities now at the middle school to the high school in a way to be useful in the High School of the Air and Correspondence program.

Similarly, the Social Education Department of the Ministry of Education has a number of other social education activities which have no relationship with the High School of the Air and Correspondence program and which are not served by the program and which do not contribute to programming. Social education is more or less defined as non-formal education in the Korean context and the Department's activities include the building of youth halls; community, public, and national libraries; support of Boy and Girl Scouts; provision of scholarships; the encouragement of women's education (including nutrition and life-improvement education). The Social Education Department, in turn, has no liaison with the Office of Labor which conducts an extensive in-service technical and vocational training program, the New Community Education Program, or with the Ministry of Agriculture and Forestry, which trains farmers and community workers.

It would appear that the Bureau of Policy Research of KEDI might well initiate a study of the goals, objectives, and operational efforts of the non-formal and in-service education activities and training programs of the various ministries in order to suggest ways in which these activities might be more mutually supportive in working together to achieve the major objectives of the government development plan.

### C. OFFICE OF PLANNING AND COORDINATION

The functions of the Office of Planning and Coordination of KEDI are well described by the activities listed under its heading on KEDI's 1975 organization chart: (1) overall planning and coordination of short - and long-term projects, (2) formulation and adjustment of budgets, (3) planning for innovation and diffusion, (4) international cooperation activities, (5) publications and coordination of periodicals.

Overall planning and coordination functions and the formulation and adjustment of budget functions are discussed elsewhere in the context of the overall KEDI policy and planning. This section discusses linkages with international and domestic organizations, various training and diffusion activities, and the publishing and periodical program managed by this office.

#### International Cooperation and Linkages

In the relatively brief period KEDI has been established, it has developed a remarkable network of international relationships which both benefit KEDI and which enable other institutions to profit from KEDI's experience. KEDI maintains a continuing program of short - and long-term training experiences of its staff at other institutions around the world, accepts interns and observers from other institutions at KEDI, does studies for other institutions, participates in studies those institutions are doing, hosts international seminars, participates in international seminars and workshops elsewhere, undertakes research studies for international agencies, and is cooperating with at least one international institution in television production.

KEDI has been active in collaborative relationships with the United Nations Educational, Scientific, and Cultural Organizations (UNESCO) and with international and regional institutions affiliated with UNESCO. KEDI, for instance, has been designated by the UNESCO National Commission in Korea as Korea's liaison with the Asian Center for Educational Innovation and Development in Bangkok (ACEID). Ewha University, the Ministry of Education, and Seoul National University also participate on the Board of National Development, affiliated with ACEID. KEDI hosted a regional science education seminar sponsored by ACEID in July 1975, with participation on the part of consultants from the National Center for Educational Research and Training, Delhi; the Science Education Research Center, National Institute for Educational Research, Tokyo; University of Malaysia, Kuala Lumpur; Science Education Center, Philippines; Ministry of Education, Singapore; University of Sri Lanka; ACEID's specialists from Bangkok; and various university science specialists in Korea and in the Ministry of Education in Korea. KEDI has accepted two contracts from ACEID for research studies, reports of which have been disseminated throughout the Asian region. The first was a national inventory of educational innovations in Korea (August, 1975, report in two volumes); and a national seminar on educational innovations held in May, 1975. KEDI's specialists have participated in a number of ACEID seminars sponsored by other organizations in other countries, and KEDI has hosted a number of trainees sent by ACEID to study KEDI's operation, including one official from Nepal, two from Thailand, four from Pakistan, one from India, and as many as 30 others for shorter visits.

KEDI has sent specialists to participate in a number of UNESCO seminars and meetings sponsored by the International Bureau of Education and the International Institute of Educational Planning in Paris, both specialized institutions under UNESCO.

KEDI maintains liaison with the United Nations Development Program and the United Nations Fund for Population Activities. KEDI currently manages the curriculum development portion of a five-year United Nations Development Program and United Nations Fund for Population Activities funded population project. It is currently proposing that the government of Korea support a United Nations Development Program request for a five-year skills training curriculum development project for middle schools. KEDI's staff have also been involved as consultants in UNDP funded UNESCO projects in Afghanistan, in collaboration with the Asian Center for Educational Innovation and Development.

KEDI maintains a cooperative relationship with the Center for Production and Training for Adult Education Television (CEPTA-TV) supported by the German Foundation in Singapore. Two KEDI staff members have been to Singapore twice for one- to three-month training sessions and KEDI is currently involved in a continuing collaborative television production project to produce agricultural training films with CEPTA.

KEDI has sent staff for short-term training of up to several months to the Japan National Broadcasting Corporation, NHK; two KEDI staff were trained for three months under the Colombo Plan in Australia in 1972; two KEDI staff spent three months in training in educational broadcasting in West Germany in 1975; from 1973 to 1976 20 KEDI staff have spent from three months to one and one-half years at Florida State University for

training in instructional design, television production, and management systems; two staff members attended a one-month seminar on population education at the East-West Center in Hawaii in 1974; four KEDI staff were trained by AMPEX in video-tape techniques and educational broadcasting for short periods in the United States during 1973-75; and two KEDI staff attended a one-month course in educational management sponsored by ACEID in Indonesia in 1975. KEDI staff have spent time studying British Broadcasting Corporation's educational activities in Britain, and BBC has sent visitors to KEDI to study the KEDI operations. Finally, KEDI hosted a seminar on education and communications, funded by the United States Information Services, in July 1975.

KEDI staff either formally or informally assist many international study teams when in Korea. For instance, the Director of the Bureau of Policy Research was the key liaison for the Government of Korea in the World Bank Sectoral Study Team which visited Korea in November-December 1973 and which issued a report in May of 1974 entitled, Educational Services in a Rapidly Growing Economy.

KEDI has also participated in the activities of INNOTECH, sponsored by the Southeast Asian Minister's Organization (SEAMEO), now located in Bangkok, and KEDI is a member of the International Curriculum Organization, located in Paris. The ICO consists of 16 countries and groups within those countries with common interests undertake a variety of collaborative activities. KEDI has helped develop a curriculum evaluation handbook and has worked with ICO in developing an International Curriculum Workshop which will be held in Indonesia in 1976. Four staff members from KEDI will participate.

There is no doubt that these activities have contributed and are contributing significantly to the technical competence of KEDI and to the image of KEDI as an internationally credible research and development agency. Although much of the original staff training for KEDI was undertaken by Florida State University under the AID contract for the Elementary and Middle School Project, KEDI has expanded its international training activities to many countries, thus establishing useful linkages with like-minded institutions throughout the world. It has similarly been willing to make its own experience available to others.

Questions for the future revolve around KEDI's ability to integrate these various training experiences into a coherent program with a philosophy and an approach that has validity. KEDI's capacity to train others and to offer consultant services to others outside Korea without detracting from its internal mission and responsibilities also bears watching.

#### Internal Linkages

As KEDI has expanded its policy studies and its research and development programs, it has increasingly functioned as the research arm of the Ministry of Education, much as the Korean Institute of Science and Technology functions as the research arm of the Ministry of Science and Technology and as the Korean Development Institute serves the Economic Planning Board. This has meant that KEDI must relate in various ways to virtually every other education institution, to many other government departments in various ministries, and to private organizations in Korea.

Specific programmatic relationships as part of specific KEDI projects are discussed in the context of those projects elsewhere in this report. Many of these relationships are in the form of sub-contracts with universities

and other institutions and individuals to undertake portions of projects which have been commissioned to KEDI by the Ministry of Education. In this way, KEDI is becoming a kind of channel for more and more Ministry of Education research and development funds.

It is conceivable that KEDI may in the future assist the Ministry in developing overall research and development strategies and in coordinating and supervising the disbursement of research project funds to institutions throughout Korea. Although KEDI has demonstrated astuteness in drawing on institutional resources elsewhere in Korea in the conduct of its various projects, neither the Ministry nor KEDI has yet fully conceptualized the long-range potential of a possible continuing research coordination function by KEDI.

In its various planning and research activities, KEDI maintains formal and informal relationships with such institutions as the Korean Institute for Research and Behavioral Sciences, the Korean Development Institute, various universities, the New Community Education Program coordinated by the Ministry of Home Affairs, various agricultural-development activities of the Ministry of Agriculture, youth-development activities of the Ministry of Education, the various professional associations, including the Korean Federation of Teacher Associations, the Korean Association of School Administrators, the National Society for the Study of Education, the Korean Institute of Science and Technology, and the Economic Planning Board. KEDI has had collaborative activities with private organizations such as the YMCA, the YWCA, and the Government-supported Boy Scouts and Girl Scouts.

A quick tabulation of service activities indicates that KEDI has sent staff to participate in at least 24 in-service training activities conducted

by other organizations in the three years 1973-1975; has conducted about 70 seminars and workshops of its own for various clientele in the school systems, universities, and the community; has provided at least 142 consultants to schools and universities; has prepared at least 33 substantial reports on educational problems at the request of other institutions; and has sent people to attend at least 45 school and university meetings of one kind or another. Some of these activities, of course, are in conjunction with funded projects, but many are not. Such activities are estimated to cost the organization approximately \$25,000 a year or four percent of the total research budget including salaries of \$680,000 per year.

#### Publications

Closely related to the above activities is the publications program. Consulting services, sponsorship of seminars, and participation in conferences are one way of disseminating KEDI information; and publications are yet another vehicle.

The total publications list, as of November 1975, appears in Appendix J. Regular publications include KEDI News (issues 1-13 had been published by November 1975); Studies in Classroom Teaching (six issues had been published by November 1975); Korean Education (a research journal of which two issues have been issued); and an Annual Report in Korean and English. In addition, 30 research reports have been issued, most in 500-copy editions; eight books; five research memos; a variety of teacher-training, handbooks and manuals; demonstration curriculum materials for the Elementary-Middle School Project, the Skills Training Project, the Population Education Project; manuals for the High School of the Air and Correspondence; and a number of informational brochures on the Institute.

Although some of the text materials have been published in cooperation with commercial textbook firms, most of the research and technical reports have been published by KEDI and distributed free in editions of 500 copies. KEDI News is published bi-monthly in editions of 2,000 copies. The Journal of Korean Education is published twice a year in editions of 500 copies, and a subscription system is being discussed as a mechanism to cover the cost of the journal.

The cost of the publications program is difficult to assess as many items are charged to projects budgeted in the various bureaus. Sixty thousand dollars are identifiable as publications funds for institutional publishing not directly linked to project activities.

It can reasonably be assumed that the small editions of research reports and the larger editions of materials published by commercial publishers, including some of the KEDI developed books, reach many key people in Korea. However, the fact that most are given free makes it difficult for KEDI to increase the quantity of the editions sufficiently to provide for any depth of leadership. The organization must examine ways of generating income from publication sales in order to make available larger editions of materials and to be able to keep the materials in print over a period of time.

One possible source of income would be the commercial marketing of the curriculum materials being developed by KEDI. However, there is concern within the government that parents are now required to spend too much money on instructional materials and if KEDI materials are substituted for existing materials, a plan must be found to make certain that the total cost to parents is not more than they now pay. Preliminary KEDI studies seem to indicate that KEDI packages would not only offer higher quality instruction

than existing materials but could also be provided at lesser cost than the range of materials that parents now are required to buy. It is understood that various modes of publishing and distributing the materials are being explored, including the possible collaboration of the Korean Federation of Teacher Associations in publishing efforts.

The KEDI materials receiving widest distribution of the moment relate to information on the field research coming out of the field testing of the elementary school materials of the Elementary-Middle School Project. These research studies are summarized in the journal, Studies in Classroom Teaching. Copies of the journal are sent to each of 6,500 elementary schools, one for the principal, one for the library, and one for the teacher in charge of research. Copies also go to 11 boards of education, to most officials of the Ministry of Education, and to educators throughout the country. More than 20,000 copies of each issue are printed. These reports include information on KEDI, and materials useful to teachers and supervisors in psychology, curriculum, evaluation, and instructional techniques.

#### Summary

In summary, the international and domestic relationships established by the Office of Planning and Coordination and its various dissemination efforts have assisted in establishing the linkages necessary for KEDI to take its place as a significant national and international force in educational research and development. These activities benefit KEDI by keeping its staff aware of related activities and approaches elsewhere and at the same time assist in developing credibility for KEDI's work among various governmental and educational communities.

A more rational method of financing dissemination activities must be developed. Although some materials can be distributed free, perhaps

as a part of the cost of funded projects, KEDI must look to receiving some income from the sale of its products, both curriculum materials and policy and research reports. This, of course, must be done carefully because of the current government sensitivity to criticisms concerning the high cost of educational materials in Korea.

In proceeding with its policy research and dissemination activities, KEDI must clearly keep in mind the rich context in which it is operating. It must continue its policy of involving other institutions and agencies in its activities toward the goal of stimulating appropriate educational research and development activity throughout the educational community of Korea. This coordinating and catalytic function on behalf of the Ministry of Education may be the most significant long-term role of KEDI.

APPENDIX A  
List of Key Staff Members

11/13/75

Position Title	Name	Education	Experience	Age	Remarks
Director	Yung Dug Lee	Graduate School of Ohio State University (Ph.D.)	Research: 2 years 2 months Teaching Profession: 16 years 3 months KEDI Director- : 3 years 2 months ship	49	
Auditor	Man Young Song	Graduate School of Social Development, Jungang University (M.A.)	Administration : 17 years 8 months KEDI Auditor 3 years 2 months	41	
Associate Director	Ouk Woo Nam	Graduate School of Education Seoul National University (M.A.)	Research : 6 months Teaching Profession : 15 years 9 months KEDI : 2 years 8 months	45	
Chief, Office of Planning Coordination (Senior Researcher Grade 19)	Se Ho Shin	Graduate School of University of Pittsburgh (Ph.D.)	Research : 18 years 4 months KEDI : 3 years 2 months	38	
Chief, Bureau of Educational Policy Research (Senior Researcher Grade 19)	Kuk Bom Shin	Graduate School of Michigan State University (Ph.D.)	Research : 11 years 6 months Teaching Profession : 4 years 5 months Administration : 1 year KEDI : 3 years 2 months	43	
Chief, Bureau of Educational System Development (Senior Researcher Grade 18)	Jae Bum Kim	Graduate School of Florida State University (Ph.D.)	Research : 7 years 2 months Teaching Profession : 1 year 4 months KEDI : 1 year 10 months	38	
Chief, Bureau of Instructional Materials Development (Researcher Grade 11)	Jin Suk Oh	Graduate School of Education, Yonsei University (M.A.)	Teaching Profession : 14 years Publishing Co. : 7 months 1 month KEDI : 2 years 2 months	39	
Chief, Bureau of Technical Support (Broadcasting Staff Grade 1-2)	Han Ik Lim	Dankuk University (B.A.)	Research : 10 years 4 months Teaching Profession : 14 years 6 months Administration: 2 years 4 months KEDI : 3 years 1 month	48	
Vice-Chief, (R&D), Office of Planning & Coordination (Researcher Grade 16)	Yoon Tai Kim	Florida State University (Ph.D.)	Research : 12 years 9 months Teaching Profession: 5 months KEDI : 3 years 2 months	40	
Chief, General Affairs Section (Administrative Staff Grade 2-5)	Suk Chang Lee	Graduate from Junior College of Kukhak University	Administration : 27 years 9 months KEDI : 2 years 10 months	50	

Position Title	Name	Education	Experience	Age	Remarks
Vice-Chief (Admin), Office of Planning Coordination (Administrative Staff Grade 2-3)	Chang Un Chun	Graduate School of Korea University (B.A.)	Administration : 14 years 6 months KEDI : 2 years 7 months	41	
Chief, Property Management Section (Administrative Staff Grade 2-2)	Sung Hae Park	Graduate School of Korean University (M.A.)	Newspaper Publishing Co.: 10 years 2 months Pharmaceutical Co.: 1 year 1 month KEDI : 2 years 4 months	40	
Chief, Accounting Section (Administrative Staff Grade 2-2)	Ha Yung Rang	Hamheung Public Commercial High School	Military Service : 16 years 11 month Company : 8 years 7 months KEDI : 2 years 8 months	49	
Acting Superintendent, Bongyang Transmitting Station (Technical Staff Grade 2-2)	Bong Won Park	Graduate School of Dong-A University (B.A.)	Military Service : 13 years 4 months Public Procutor's Office : 5 years KEDI : 2 years 8 months	41	
Chief, Library (Administrative Staff Grade 3-4)	Tae Jin Kim	Graduate School of Management, Korea University (B.A.)	Military Service: 16 years Company : 4 years 2 months KEDI : 3 years 1 month	48	
Senior Researcher (Grade 15)	Shin Bok Kim	Graduate School of Education University of Pittsburgh (Ph.D.)	Research : 2 years KEDI : 1 year 11 months	30	
Senior Researcher (Grade 14)	Chong Jae Lee	Graduate School of Education Florida State University (Ph.D.)	Research : 5 years 6 months KEDI : 11 months	31	
Senior Researcher (Grade 13)	Yoo Jae Song	Graduate School of Education, Florida State University (Ph.D.)	Research : 3 years KEDI : 5 months	32	
Broadcasting Staff (Grade 2-2)	In Deog Song	Dongkuk University (B.A.)	Teaching Profession : 19 years 11 months KEDI : 2 years 8 months	41	
Broadcasting Staff (Grade 2-2)	Sang Keun Min	Junior College of Serabul Arts University	Teaching Profession: 11 years 6 months KEDI : 2 years	41	

## APPENDIX B

## Associated Staff-KEDI

Consultant

Dr. Hogwon Kim	College of Education S.N.U.	Professor	E-M Project
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Research Professor

<u>Name</u>	<u>Institution</u>	<u>Title</u>	<u>Area of Consulting</u>
Mr. Se Kee Kim	Former Director of Academic Affairs KyungGi Board of Edu.		School management system
Mr. In Soo Sen	Seoul Industrial Col.	Professor	Edu'l Philosophy and History
Mr. Sae Gu Jung	SangMyung Women's College	Professor	Social Studies
Mr. Boong Bae Park	Seoul Teacher's College	Professor	Korean Language (Language Art)
Dr. Don Hee Lee	College of Education Seoul National Univ.	Assistant Professor	Moral Education
Mr. Kye Hark Lee	Dong Duk Women's	Assistant Professor	Industrial Education
Mr. KwangJo Koo	Seoul Teacher's College	Professor	Mathematics
Mr. Chul Joon Park	Seoul Teacher's College	Professor	Fine Arts
Mr. Jong Sun Kim	Graduate School of Ed. Ehwa Women's Univ.	Associate Professor	Physical Education
Mr. ChangWhan Jang	Seoul Teacher's Col.	Professor	Music
Dr. In Hee Lee	Dong Duk Women's Col.	Professor	Home Economics
Dr. Gee Choon Lee	Seoul Industrial Col.	Professor	Agriculture
Mr. Byung Sung Oh	Seoul Teacher's Col.	Professor	Mathematics
Mr. Jung Ho Woo	Seoul Teacher's Col.	Professor	Mathematics
Dr. Woo Chul Kang	Graduate School of Ed. Ehwa Women's Univ.	Professor	Social Studies and Pop. Ed.
Mr. Kyung Kyun Chung	Graduate School of Ed. Ehwa Women's Univ.	Professor	Sociology & Pop. Ed.
Mr. An Jae Kim	Graduate School of Environment, S.N.U.	Professor	Ecology & Pop. Ed.

## Appendix C

Educational Broadcasting System Channel, Transmitter,  
Service Area and Facilities Data

## Educational Broadcasting System Scope

Broadcasting System	UHF -TV (NTSC color)		FM-Radio (stereo)
Channels	HLGM-TV (Ch.20)	HLGN-TV (Ch.26)	HLGM-FM(104.9)
Transmitter Power	Video-output 1kw (ERP 10kw)  audio-output 100w (ERP 1 kw)	Video-output 1ke (ERP 10kw)  audio-output 100w (ERP 1kw)	power-output 100w (ERP 400w)
Transmitting antenna height	10,000 ft. above sea level	10,000 ft. above sea level	10,000 ft. above sea level
Service Area	90 mile diameter (144km)	90 mile diameter (144km)	132 mile diameter(211km)

## Appendix D

## Scope of Facilities

	Transmitting site	Studio site
Location	North Choong Chung Pro- Vince, Chechon-kun, Pongyang-myun, Yunbahng- Rhi, Mt. 220 longitude : 128 07' latitude : 37 08' 40"	Seoul, Songdong-ku, Woomyun-dong, Mt. 20-1 longitude : 127 01' 03" latitude : 37 28' 10"
Building	<u>Total : 1290 sp. ft.</u>	<u>Total : 10,536 sq. ft.</u>
Floor Space	machine shop - 120 sq. ft.  offices - 318 " dormitory - 414 " security room - 24 " storage - 413 "	science lab & waiting  room - 816 sq.ft TV studio A - 720 " TV studio B - 402 " Control rooms - 738 " research offices-4,740 " misc. rooms -3,120 "
Land Area	264,000 sq. ft.	91,920 sp. ft.
Construction Costs	\$950,000	\$1.9 million

## APPENDIX E

## Broadcasting Transmitting Facilities and Equipment

Item	Steps Year Expense	Step 1				Step 2		Total No
		1975		1976		1978		
		No	Total Cost	No	Total Cost	No	Total Cost	
S T U D I O S	VTR	6	\$552,000					6
	Studio Camera	4	\$ 200,000		\$ 100,000			6
	Telecine System	3	200,000	2	120,000			5
	Lighting System	2	166,000	1	183,000			3
	TV Control Unit	4	380,000	1	95,000			5
	Radio Control Unit	2	42,500	1	21,000			3
	A-V Equipment	1	54,000	1	54,000	1	\$54,000	3
	Testing Equipment	1	16,000	1	16,000	1	16,000	3
	Mobile Van					1	400,000	1
	Miscellaneous		144,000		50,000		50,000	
	Total		\$1,734,000		\$539,000		\$520,000	
T R A N S M I T T I N G  S I T	Acrostat	2	2,161,000	2	3,789,000			
	TV Transmitter	4	1,481,000	4	2,597,000			
	FM Transmitter	2	407,000	2	713,000			
	Telemetry Command System	2	1,372,000	2	2,405,000			
	Miscellaneous	8	1,094,000	8	1,918,000			
	Services		432,600		758,000			
	Transportation		52,400		92,000			
	Mobile Van			1	500,000			
Total		7,000,000		12,772,000				

## APPENDIX F

## KEDI PROCEDURE FOR SCRIPT WRITING AND EVALUATION

## ITV PROGRAMS

A. Script Writing Procedure

1. Preliminary study of the lesson units chosen to be taught through ITV programs.
  - a. Critical review of the current instructional objectives of the lesson units (by subject specialist, script writer).
  - b. Detailed analysis of the lesson materials for ITV presentation (by subject specialist, script writer).
  - c. Decision of specific instructional designs for ITV presentation of the lesson materials (by subject specialist, script writer, ITV specialist).
2. Layout for writing the script
  - a. Sequential layout of the lesson materials for ITV presentation (by script writer).
  - b. Time allotment for ITV presentation of the lesson (by script writer).
  - c. Choice and manner of presentation of video media for the ITV lesson (by script writer).
  - d. Choice and manner of presentation of audio media for the ITV lesson (by script writer).
  - e. Layout for writing workbook exercises for the ITV lesson (by script writer).
3. Critical review and possible revision of the layout for the script
  - a. Critical review of instructional objectives and lesson materials of the ITV lesson (by subject specialist, script writer, ITV specialist).
  - b. Critical review of the sequential flow of the ITV lesson (by subject specialist, script writer, ITV specialist).
  - c. Critical review on the choice and manner of presentation of video media for the ITV lesson (by subject specialist, script writer, ITV specialist, ITV producer).

- d. Critical review on the choice and manner of presentation of audio media for the ITV lesson (by subject specialist, script writer, ITV specialist, ITV producer).
  - e. Critical review of the layout for writing workbook exercises for the ITV lesson (by subject specialist, script writer, ITV specialist).
4. Script writing
    - a. Writing the script (by script writer).
  5. Critical review and possible revision of the script
    - a. Critical review of the development of the ITV lesson (subject specialist, script writer, ITV producer).
    - b. Critical review of the overall video effects of the ITV lesson (by script writer, ITV specialist, ITV producer).
    - c. Critical review of the verbal aspects of the ITV lesson (by subject specialist, script writer, ITV specialist).
    - d. Critical review of the other technical (production) aspects of the ITV lesson (by script writer, ITV specialist, ITV producer).
    - e. Overall critical discussion and possible revision of the ITV lesson (by subject specialist, script writer, ITV specialist, ITV producer).
  6. One to one tryout
    - a. One to one tryout with students with respect to the content of the ITV lesson (by script writer).
    - b. One to one tryout with students with respect to audio visual aspects of the ITV lesson (by script writer).
  7. Revision of the script
    - a. Revising the script according to the outcome of the one to one tryout (by script writer).
- B. Evaluation Criteria
1. Instructional objectives and subject matter of the ITV lesson
    - a. Is ITV the most appropriate media for the subject matter?
    - b. Does the ITV lesson achieve the proposed instructional objectives?

- c. Does the ITV lesson take advantage of all the possible benefits of using ITV media?
- d. Is the subject matter fully readjusted for ITV presentation?
- e. Is every aspect of the ITV lesson appropriate for the given audience (students)?

## 2. Development of the ITV lesson

- a. Is the development of the ITV lesson natural and smooth?
- b. Is the time allotment for each stage of the development of the ITV lesson appropriate?
- c. Are audio-visual media properly utilized for all the relevant parts of the ITV lesson?
- d. Is the television teacher skillful enough for the ITV lesson?
- e. Are the television students skillful enough for the ITV lesson?
- f. Is the ITV lesson designed to induce student's participation in it as far as possible?
- g. Does the ITV lesson constitute a natural sequence with preceding lessons?
- h. Is the ITV lesson designed to naturally lead to the follow-up activities?
- i. Is the ITV lesson so enjoyable to audience (students) that it gives a lasting curiosity and interest in the subject matter to the audience (students)?

## 3. Workbook Exercises for the ITV Lesson

- a. Are the quantity and level of the workbook exercises for the ITV lesson appropriate for the students?
- b. Do the workbook exercises cover all the major points in the ITV lesson?
- c. Are the workbook exercises designed to complement the ITV lesson?
- d. Are the workbook exercises designed to stimulate students' further follow-up study beyond the ITV lesson?
- e. Is the timing for doing workbook exercises (before, after or during the ITV lesson) appropriate?
- f. Are the workbook exercises so designed that the students can do them for themselves?

APPENDIX G

One Week Schedule of Educational Radio

November 17, 1971 (Monday)

Hour	Grade & program	Title	Lesson Objectives	Contents	Related Subjects	Subjects for Preparation
10:00	News on School Broadcasting					
10:05	Moral classroom higher grades (5th & 6th)	Miserable life of people in North Korea	<ul style="list-style-type: none"> <li>To provide information on north Korean people's miserable life under communist rule and to promote complete anti-communist spirit</li> </ul>	<ul style="list-style-type: none"> <li>Communist party's inhuman plans (schemes)</li> <li>Miserable life of Oh, Su-duk, a technical worker</li> <li>Young men's coercion in north Korea without freedom of expression</li> <li>Release of anti-communist prisoner of war to free world. (June 18, 1953)</li> </ul>	social life	Map of Korean anticommunist pictorial news news event materials
10:20	National language classroom for first grade	<ol style="list-style-type: none"> <li>An interesting word-game</li> <li>(Listening game)</li> </ol>	<ul style="list-style-type: none"> <li>To develop a capability for using national language and its practical use through an interesting word-game.</li> </ul>	<ul style="list-style-type: none"> <li>To develop quiet-listening attitude</li> <li>To listen intelligently to others conversation</li> <li>To memorize words and sentences while listening to a word-game.</li> </ul>		Word-flash cards used in listening game
10:30	National history classroom for all the six grades	Ju, Shi-kyung	To teach Ju's contributions to the development of our national language, Hangul.	<ul style="list-style-type: none"> <li>His childhood</li> <li>His educational activities</li> <li>His books and the significance of his popularization of Korean alphabet, Hangul</li> </ul>		Ju's biography
10:45	Social life classroom for lower grades (1st & 2nd)	Those who help promote our health	To promote our health and preventive measures through the use of available facilities outside of hospitals	<ul style="list-style-type: none"> <li>Organization and specific duties of a health center</li> <li>Specific duties of a western drugstore and a Chinese Drugstore</li> <li>Kinds of infectious and contagious diseases, and prevention of them</li> <li>How to lead a healthy life and prevent disease.</li> </ul>	Social life(2-2)	<ul style="list-style-type: none"> <li>Pictures of a western and a Chinese drugst</li> <li>A chart of sterilization method, and sl</li> </ul>

11:00	Music classroom for third grade	Musical scale	<ul style="list-style-type: none"> <li>To cultivate two-quarter time rhythm skill for concert</li> <li>To promote advanced capability of reading and singing in "C" major key</li> </ul>	<ul style="list-style-type: none"> <li>Reading and counting rhythm</li> <li>Musical notes and singing a song with words</li> <li>Singing in time with a rhythm concert</li> <li>Writing musical notes after listening to rhythm</li> <li>Composing melody after listening to the rhythm</li> </ul>		Rhythm instruments and tone instruments
11:15	English	Classroom	English Classroom for First Year Middle School			
11:30	All grades	Interesting children's Stories				
11:45	National classical folk music appreciation	Japka (3) Dalgori (Traditional music genre)	<ul style="list-style-type: none"> <li>To understand various kinds of Dalgori songs and their contents</li> </ul>	<ul style="list-style-type: none"> <li>Types of Japka songs, and Dalgori song</li> </ul>		
12:00						
13:00			News on School Broadcasting			
13:05	National history classroom for all 6 grades all over the country		Rebroadcasting (15th of November)			
13:15	Special Education classroom for third and fourth grades		"			
13:30	National language classroom for 4th grade		"			
13:45	Music appreciation for all 6 grades		"			

November 18, 1975

hour	Grade & program	Title	Lesson Objectives	Contents of Broadcasting	Related subject	Objects for Preparation
10:00			News on school broadcasting			
10:05	Vocal education classroom for lower grades	Newly produced television	<ul style="list-style-type: none"> <li>To foster patriotism by recognizing the importance of the development and advancement of our country</li> </ul>	<ul style="list-style-type: none"> <li>A story about quality improvement of Korean-made commodities and exportation</li> <li>Patriotism through use of Korean made commodities</li> </ul>	Social life	Television set, statistics of exports, school utensils, daily necessities
10:20	National language classroom for second grade	6,7 Friendly (2) brothers	<ul style="list-style-type: none"> <li>To recognize various words in a sentence and to write a sentence with adequately selected words</li> </ul>	<ul style="list-style-type: none"> <li>To recognize vocabulary one must pay attention to pronunciation</li> <li>To comprehend a fiction story</li> <li>To identify honorific stem of words</li> <li>To know the meaning of difficult words</li> <li>To trace onomatopoeias and foreign origin of words</li> </ul>		Word card
10:35	National history classroom for fifth grade	Old tombs and old mural paintings	<ul style="list-style-type: none"> <li>To know cultural and historical significance of old tombs and old mural paintings</li> </ul>	<ul style="list-style-type: none"> <li>Relationship between old tombs and art</li> <li>Cultural and historical significance of old tombs and mural paintings</li> </ul>	Fine arts (6th grade) mural paintings (hunting)	A picture of old tombs and mural paintings from three dynasties
10:45	Social life classroom for third and fourth grades	Development of farm land	<ul style="list-style-type: none"> <li>To provide information about our country's food production and to emphasize that we must continually make every effort to expand our farm land and to improve agricultural techniques</li> </ul>	<ul style="list-style-type: none"> <li>Our country's population and food production situation</li> <li>Preservation and expansion</li> <li>Expansion of food production and reduction of consumption</li> <li>Rural life in the 1980's.</li> </ul>	Social life (4-2) Preservation and development of national territory	<ul style="list-style-type: none"> <li>A chart showing relationship between population and food production</li> <li>A chart showing increases in exports</li> <li>A picture of reclamation projects</li> </ul>
11:00	Music classroom for fourth grade	Singing for enjoyment	<ul style="list-style-type: none"> <li>To develop a capability for reading, singing, and playing the song on a instrument by himself</li> </ul>	<ul style="list-style-type: none"> <li>Reading and counting rhythms at each minor interval</li> <li>Playing a melody instrument</li> <li>Reading of rhythms by musical notes</li> <li>Singing in time with instrument concert</li> </ul>		Rhythm instrument, melody instrument

November 18, 1975

hour	Grade & program	Title	Lesson Objectives	Contents of Broadcasting	Related subject	Objects for preparation
11:15	English classroom		English classroom for second year middle school			
11:30	All grades		Interesting Childrens' Stories			
11:45	Musci appreciation for lower grades	Bell	To introduce violin concert and To learn the technique for playing the piano	<ul style="list-style-type: none"> <li>Explanation of Paganini's violin concert and listening to major melodies in it</li> <li>Appreciation of Liszt's "Bell" for piano</li> <li>To study about Paraghrase</li> </ul>		
12:00						
13:00			Broadcast of School News			
13:05	National history classroom for all grades		Rebroadcasting (17th of November)			
13:15	Moral Education classroom for higher grades		"			
13:30	National Language classroom for first grade		"			
13:45	Musci appreciation class for all grades		"			
14:00						

November 19, 1975 (Wednesday)

Hour	Grade & program	Title	Lesson Objectives	Contents of Broadcasting	Related Subjects	Objects for Preparation
10:00	News on School Broadcasting					
10:05	Moral Education classroom for third and fourth grades	Exam. paper which was written by cheating	<ul style="list-style-type: none"> <li>To have a righteous mind, to think seriously, and to behave sincerely</li> </ul>	<ul style="list-style-type: none"> <li>Previewing and to reviewing habits</li> <li>To begin an exam. by solving easy problems and then concentrating deeply on more difficult problems</li> <li>Hyuin's undeserved punishment</li> </ul>	Mathematics	Exam, Diary
10:20	National language classroom for third grade	6. Our festival	To learn the form of a drama and to be able to perform a practical play	<ul style="list-style-type: none"> <li>To study the form of a drama</li> <li>To find the character's personality</li> <li>To study contents of each scene and to set up a production</li> <li>Choosing the cast and the dialogue</li> </ul>		Drama sound effects
10:35	National language classroom for 6th grade	Japanese military rule and the March first liberation movement	<ul style="list-style-type: none"> <li>To provide the real meaning of the March First liberation movement and recognizing its importance for our nation</li> </ul>	<ul style="list-style-type: none"> <li>Japanese colonial policies</li> <li>The origin, the development, the consequences, and significance of the March first liberation movement</li> </ul>	2-1 social life "March first national holiday"	Brief history of Japanese colonial politics
10:45	Social life classroom for higher grades	Entrance to a higher level school	To provide a knowledge of our country's educational system and the purpose of the entrance to higher learning, and to promote self-study.	<ul style="list-style-type: none"> <li>The purpose of the entrance to higher learning</li> <li>The reason for anyone studying through his whole life</li> <li>A successful example of self-support and self-study.</li> <li>Our country's educational system</li> </ul>	Social life 6-2 4. The road we must travel	<ul style="list-style-type: none"> <li>Our country's educational</li> <li>Biographies of great men</li> </ul>
11:00	Music classroom for fifth grade	Side by side	<ul style="list-style-type: none"> <li>To provide a capability of reading and singing in "C" major key</li> <li>To master the beauty of choral harmony</li> </ul>	<ul style="list-style-type: none"> <li>To read and to count rhythms</li> <li>To teach Syllable names and words and two-part choral singing</li> <li>To sing while paying attention to stress</li> <li>To sing while counting compound rhythms</li> </ul>		Melody instrument

11:15	English classroom		English Classroom for Third Year Middle School
11:30	For all 6 grades		Interesting Children's Stories
11:45	Music appreciation for higher grades	Interlude	<p>To appreciate "Covallerin Rusticana" and to learn the role of an interlude and the melody of the beautiful famous song</p> <ul style="list-style-type: none"> <li>• Brief history of Mascani and the motive for composing the song</li> <li>• Composition of an opera <sup>and</sup> explanation of its contents</li> <li>• To learn major melodies in an opera interlude and their composition</li> </ul>
13:00	News on School Broadcasting		
13:05	National history classroom for fifth grade		Rebroadcasting (18th of November)
13:15	Moral Education classroom for lower grades		"
12:30	National language classroom for Second grade		"
13:45	Music appreciation classroom for lower grade		"
14:00			

November 20, 1973 (Thursday)

hour	Grade & program	Title	Objectives	Contents	Related subjects	Objects for preparation
10:00	News for Children					
10:05	Vocal education classroom for higher grades	Traditional ritual in Hyung Sung's house	<ul style="list-style-type: none"> <li>To provide a knowledge on rules governing domestic rituals and to have pupils observe them in their homes</li> </ul>	<ul style="list-style-type: none"> <li>Complicated procedures of old domestic rituals</li> <li>The real meaning of new rules for domestic rituals</li> <li>Good points that must be observed by us</li> </ul>	National history Social studies	Pictures of address delivered in performing ritual services
10:20	National language classroom for fourth grade	6 roles of words old sayings and proverbs	<ul style="list-style-type: none"> <li>To learn what old sayings and proverbs imply and to provide a capability to use them in daily life</li> </ul>	<ul style="list-style-type: none"> <li>To collect and to make known old sayings and proverbs</li> <li>Differences between an old saying and a proverb</li> <li>Lessons that an old saying and a proverb teach us</li> <li>To find and to learn the forms of old sayings and a proverbs</li> </ul>		Cards with old sayings and proverbs
10:35	National history classroom for fifth grade	Pagoda made of stone	<ul style="list-style-type: none"> <li>To learn about famous stone pagodas and their artistic teachings</li> </ul>	<ul style="list-style-type: none"> <li>Buddhism and the pagoda</li> <li>Materials of a tower and their classification</li> <li>A representative pagoda</li> </ul>	Fine art for 6th grade "Raised work of Sukkoram"	Pictures of our country's
	National science classroom for lower grades	Magnetic poles	<ul style="list-style-type: none"> <li>To prove that there are two magnetic poles in a magnet</li> </ul>	<ul style="list-style-type: none"> <li>To find the poles of magnetic force</li> <li>There are two poles-North pole and South pole</li> <li>To understand the relationship of magnetic strength</li> <li>Kinds of magnets and their effective forces</li> </ul>	2-2 Natural science Magnetic Force	Magnetic object magnet
11:00	Vocal classroom for 4th grade	A quiet night	<ul style="list-style-type: none"> <li>To provide a capability to sing the song with musical notes and with words</li> </ul>	<ul style="list-style-type: none"> <li>To read and to count rhythms</li> <li>To sing the song with musical notes in two-part-chorus</li> <li>To sing the song with words in two part-chorus and to sing while learning the words by heart</li> <li>To listen and to write rhythms</li> </ul>		Rhythm Instrument music sheets

hour	grade & program	Title	Objectives	Contents	Related subjects	Objects for preparation
11:15	English classroom		English classroom for first year Middle School			
11:30	All six grades		Interesting children's stories			
11:45	Music appreciation for lower grade	The heaven and hell prelude	<ul style="list-style-type: none"> <li>To learn the characteristics and contents of a comic opera</li> </ul>	<ul style="list-style-type: none"> <li>Explanation of contents and characteristics of a comic opera</li> <li>To become familiar with melodies in preludes and plots of operas</li> <li>To introduce the composer and his other works</li> <li>To explain the composition of a prelude and instruments used</li> </ul>		
12:00						
13:00			School News Broadcast			
13:15	National history classroom for six grade		Rebroadcasting (19th of November)			
13:30	Moral education classroom for third and fourth grades		"			
13:45	National language classroom for third grade		"			
14:00	Music appreciation for higher grade					

November 21, 1975 (Friday)

Hour	Grade & Program	Title	Objectives	Contents	Related subjects	Objects for preparation
10:00 News for Children						
10:05	Moral Education classroom for lower grades	Chul-soo's Near-Tardiness	<ul style="list-style-type: none"> <li>To show the importance of time and punctuality</li> </ul>	<ul style="list-style-type: none"> <li>He got up very late because he had watched TV late the preceding night.</li> <li>What should you do if you would not want to be late for school?</li> <li>Old sayings and proverbs pertaining to time.</li> </ul>	National language Social Studies	Clock Time table Slogans Collection of proverbs.
10:20	National language classroom for fifth grade.	5. A way of reclamation. 2 The dense forest in Indonesia.	<ul style="list-style-type: none"> <li>To learn the characteristics and contents of a travelogue</li> </ul>	<ul style="list-style-type: none"> <li>To provide a capability to narrate a writers' journey by means of a map</li> <li>To tell about our young technicians' efforts overseas</li> <li>To learn how to write a travelogue.</li> <li>Collecting and arranging data and recording major events while traveling</li> </ul>	5-2 Social life in Asian Countries)	A map and pictures of Indonesia. Writer's Itinerary Wall Map
10:35	National history classroom for 6th grade	Provisional Government of ROK	<ul style="list-style-type: none"> <li>To help foster a historical and ethnic understanding of the Korean people.</li> </ul>	<ul style="list-style-type: none"> <li>Commencement of ROK's Provisional government-course of history.</li> <li>Activities of the provisional government.</li> <li>Continuous independence movement.</li> </ul>		Brief history of independence movements.
10:45	Natural science classroom for third and fourth grades.	Velocity	<ul style="list-style-type: none"> <li>To provide a comprehension about velocity, which is the distance that an object moves from one point to another point in a given unit of time.</li> </ul>	<ul style="list-style-type: none"> <li>The distance that a toy car moves, and the time required</li> <li>Comparison of velocities; velocity of a bicycle, of running, and of hopping.</li> </ul>		Second-counting watch. (Time watch) Toy car

11:00	Music classroom for first grade	Rabbit	<ul style="list-style-type: none"> <li>To provide ability to read and sing by musical notes.</li> </ul>	<ul style="list-style-type: none"> <li>To learn by heart the words in the song.</li> <li>To listen and to sing the words.</li> <li>To count compound rhythms.</li> <li>To sing while counting compound rhythms.</li> </ul>	1-2 National language "Rabbit & Turtle" 1-1 National language "Story on picture"	Rythm instrument
11:15	English classroom English Classroom for Second year Middle School					
11:50	All 6 grades		Interesting children's stories			
11:45	Music appreciation for higher grade	Flower Waltz	To provide the understanding that some kinds of dance compositions may vary according to composer.	<ul style="list-style-type: none"> <li>Explanation of the plot outline and scenes of Tchaikovsky's "Nutcracker".</li> <li>To introduce the melodies of Drigo's "Flower Waltz", and to compare it with similar kinds of dance compositions</li> <li>Explanation of the background of the waltz</li> </ul>		
13:00	News on School Broadcasting.					
13:05	National history classroom for fifth grade	Rebroadcasting (20th of November)				
13:15	Morality classroom for higher grades					
13:30	National language classroom for fourth grade					
13:45	Music appreciation for lower grades					
14:00						

November 22, 1975 (Saturday)

Hour	Grade & Program	Title	Objectives	Contents	Related Subjects	Objects for Preparation
10:00	News for Children .					
10:05	Moral Education classroom for third and fourth grades	Reserved Army Soldier and Father	<ul style="list-style-type: none"> <li>To foster a feeling of gratitude for the efforts of reserved army soldiers who protect our community.</li> </ul>	<ul style="list-style-type: none"> <li>Training and call up day of a father who is a reserved army soldier.</li> <li>Clean up Maneuvers of Kang won-do's reserved soldiers against armed red guerrillas.</li> <li>Specific duties of reserved soldiers.</li> </ul>	Social Studies	Pictorial News Photographs
10:20	National language classroom for sixth grade.	7. The world of poetry 1 Song and expression	<ul style="list-style-type: none"> <li>To cultivate the ability of expression after comparing the relationship between our language and its expression.</li> </ul>	<ul style="list-style-type: none"> <li>Differences between poetic expressions and narrative sentences</li> <li>The portion of a poem in which feelings of mind are best expressed</li> <li>To hold a poetry-reading meeting.</li> <li>To find and learn particular poetic expressions</li> </ul>		Children's collection of world cards. Children's word card collection?
10:35	National history classroom for all the six grades	Son, Byung-il	<ul style="list-style-type: none"> <li>To study his achievements in the anti-Japanese struggle for independence and his character</li> </ul>	<ul style="list-style-type: none"> <li>His childhood and disposition.</li> <li>One of the major leaders of the March First Independence Movement</li> <li>His character and religious merits</li> </ul>		His biography.
10:45	Natural science classroom for higher grades	Directions	<ul style="list-style-type: none"> <li>To study the fact that an object's direction of movement is determined by the direction of the imposing force</li> </ul>	<ul style="list-style-type: none"> <li>An object's direction of movement when it is pulled forward</li> <li>An object's moving direction when it is pulled forward from two directions. (diagonal direction)</li> </ul>		Objects/string
11:00	Music classroom for 2-nd grade	With whom will I play?	<ul style="list-style-type: none"> <li>To read and count four-quarter time rhythm.</li> <li>To cultivate feeling for tones by reading and singing notes.</li> </ul>	<ul style="list-style-type: none"> <li>To count four-quarter double rhythm.</li> <li>To read and to sing musical notes</li> <li>To sing with the words of a song</li> <li>To sing in time with rhythm for concert</li> </ul>		Big drum Small drum Triangle Symbols

11:15	English Classroom	English classroom for third year Middle School		
11:30	For all the six grades	Interesting children's stories		
11:45	National classical folk music appreciation	Pyungan-do folk songs	To examine the characteristics of Pyungan-do folk songs through a comparison with those of Kyungki-do.	<ul style="list-style-type: none"> <li>• Pyungan-do folk songs, based on Su-sim-ga.</li> <li>• Background, contents, and characteristics of Su-sim-ga.</li> </ul>
13:00	School News Broadcast			
13:05	National history classroom for 6-th grade	Rebroadcasting(21-st of November)		
13:15	Moral Education classroom for lower grades	"		
13:30	National language classroom for 5-th grade	"		
13:45	Music appreciation for higher grades	"		

## Appendix H

## The Number of Radio Lecture Programs and Classroom Instruction Hours (1st Year)

Subject	Radio Programs		Classroom Instruction	
	1st Semester	2nd Semester	1st Semester	2nd Semester
National Language	40	41	8	8
Social Studies	16	16	3	3
Ethics	16	16	3	3
Geography	16	16	3	3
Mathematics	20	21	11	11
Biology	20	21	8	8
Athletics	9	12	8	8
Military Exercise	8	13	4	4
Music	25	26	3	3
Fine Arts	10	12	6	6
General Industry	10	12	3	3
Technology (Male)	10	11	2	2
Technology (Female)	10	11	2	2
English	50	51	10	10
Extra Activity	10	12	4	4
Orientation	1	1	-	-
Total	271	292	77	77

**APPENDIX I**

**Photographs not reproduced but submitted with report.**

## APPENDIX J

KEDI PUBLICATIONS LIST  
(As of November 1975)1. Research Reports

- No. 1 - Kim, Yung Ho and others. Toward a New Instructional System. 1973.
- No. 2 - Kim, Yong Woo and others. Current Status and Problems in Teacher Education for Korean Primary Schools. 1973.
- No. 3 - Han, Jong Ha and others. An Application of the KEDI Instructional System Model to Science Teaching in a Middle School. 1973.
- No. 4 - Jun, Sung Yun and others. An Exploratory Study of the Key Variables for the Diffusion of Innovation. 1973.
- No. 5 - Ki Yung Woo and Kim, Dong Gu. Perceptual Orientations of Teachers and the Student in Teacher Training Institutes. 1973.
- No. 6 - Hong, Dai Shik and Lee, Chi Yung. A Study on the New Community Education Activities: Its Status and Relationship to Some Variables. 1973.
- No. 7 - Kim, Shin Bok and others. Supplementary Revision of the Educational Development Plan, 1972-1976. 1974.
- No. 8 - Kim, Yung Ho and others. An Application of a New Instructional Model. 1974. Summary Report of the Second Small-Scale Tryout of the KEDI Instruction System.
- No. 9 - Shin, Kuk Bom and others. Teacher's Guide for Population Education in Social Studies of Grade 1st, 2nd, and 3rd in Elementary School. 1974.
- No. 10 - Shin, Kuk Bom and others. Curriculum Development for Population Education (Social Studies in Elementary and Middle School). 1974.
- No. 11 - Lee, Keay Hwak and others. Development of Individually Assessed Skill Learning Model and Related Instructional Materials for the Improvement of Industrial Arts Program in the Middle Schools. 1973.
- No. 12 - Chung, Sae Gu and others. An Experimental Research on the Effect of Inquiry Teaching: An Application of the KEDI General Instructional System Model to the Inquiry Teaching in Social Studies. 1974.
- No. 13 - Shin, Se Ho and others. A Feasibility Study of the Individually Assessed Skill Learning Model in the Middle School. 1974.

- No. 14 - Yoon, Hyung Won and others. A Field Survey of the Potential Demonstration Schools for the Large-Scale Tryout. 1974.
- No. 15 - Kim, Shin Bok and others. Population Dynamics and Educational Planning. 1974.
- No. 16 - Ki, Yung Ho and Park, Jae Moon. A Preliminary Study for Developing the Instructional Procedure Model and Orientation Program for the Primary Grade. 1974.
- No. 17 - Hong, Dae Shik and Hong, Dong Shik. The Strategies for Implementation of New Community Education Programs. 1974.
- No. 18 - Kim, Suil, Gunja Shin, Chonghi No, Achung Pork, Chongshik Kim, Kyung Hee Park. A Study on Curriculum Development for Population. 1975.
- No. 19 - Yonghee Song and others. A Study on Educational Organization for Population Education. 1975.
- No. 20 - Research Report of the 3rd Small-Scale Tryout for the Development of a New Educational System.
- No. 21 - 1974 National Assessment of Student Achievement Progress, Elementary and Middle Schools.
- No. 22 - Kim, Suil and others. A Study on the Curriculum and Instruction Materials for Population Education in Elementary and Middle Schools. 1975. Summary Report of the Small-scale tryout.
- No. 23 - Kim, Se Kee and others. A Field Survey for the Development of School Management System of Elementary and Middle Schools. 1975.
- No. 24 - Hong, Dai Shik and others. Towards Improvement of the New Community Education For Rural Development. 1975.
- No. 25 - Lee, Kye Hark and others. Survey on the Industrial Arts and Home Economics Education in Middle Schools. 1975.
- No. 26 - Lee, Kye Hark and others. Study on the Development of the Industrial Arts Curriculum for Middle Schools. 1975.
- No. 27 - Lee, Kye Hark and others. Study on the Development of the Home Economics Curriculum for Middle Schools. 1975

- No. 28 - Kim, Yoon Tai and others. Determinants for Recurrent Expenditures and Economic Scale in Private Secondary School Operation. 1975.
- No. 29 - Kim, Suil and others. A Study on the Curriculum and Instruction Materials for Population Education in High School. 1975.

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## II. Books

1. Lee, Yung Dug and others. Explorations in the Goals of Korean Education. 1973.
2. Kim, Mahn Ki and others. Cases of Educational Innovation in Korea. 1973.
3. Kim, Yoon Tai and others. Explorations in the Education Policy for National Unification of Korea. 1973.
4. Lim, Bang Hyun and others. Saemaeul Education: Theory and Background. 1973.
5. Kim, Yung Ho and others. Theoretical Background of the Diffusion of Educational Innovations. 1973.
6. Son, In Soo and others. Historical Background of the National Education Charter. 1974.
7. Son, In Soo and others. Image of Ideal Koreans. 1974.
8. Lee, Yung Dug and others. Prospects of Innovation in the Korean Educational System. 1975.

### III. Research Materials

1. Kim, Yoon Tai and others. Annotated Bibliography on Educational Policy and Administration. 1973.
2. Yoo, An Jim and others. Annotated Bibliography on Teachers and Teacher Education. 1973.
3. Koo, Hark Bong. Family Planning and Qualitative Development of Education. 1973.
4. Kim, Shin Bok and others. Basic Statistics for Educational Planning. 1975.
5. Koo, Hark Bong and others. The Draft of In-Service Teacher Training Programs for the Qualification of Elementary and Middle School Teachers. 1975.

### IV. Teacher Training Materials

1. Teaching materials for short-term workshop of high-school teachers
2. Training materials for materials developers
  - (1) Item writing
  - (2) Techniques of programmed instruction materials
  - (3) Curriculum: Theory, practice, evaluation
  - (4) Theory and practice in evaluation
  - (5) Theory and practice in ITV education
  - (6) Techniques of ITV script writing (I)
  - (7) Techniques of ITV script writing (II)
  - (8) Learning and instruction
  - (9) Instructional Design (I)
  - (10) Instructional Design (II)
  - (11) Guides for teaching-learning materials
3. Teachers' study manual for high school of air
  - (1) 1st materials
  - (2) 2nd materials
4. Teacher's Handbook for KEDI's New Educational System

### V. Instructional Learning Materials

1. Testing Materials of Elementary School Textbooks (Experimental use)  
4th, 5th, 6th Grades:
  - (1) Formative Evaluation - 30 sets
  - (2) Summative Evaluation - 9 sets

2. The 1st Small-Scale Demonstration Materials (3, 5, 9 grades - Mathematics, Nature Study)
  - (1) Explanation of Instructional Process Models and Teachers Manual - one set each for 3, 5 grades
  - (2) Teachers Guide for Instruction - 4 sets
  - (3) Workbooks - 4 sets
  - (4) Diagnostic, formative, summative Test - 16 sets
3. The 2nd Small-Scale Demonstration Materials (2nd Grade Language, Mathematics, Morals)
  - (1) Explanation of Instructional Process model and Guide for Demonstration School Management
  - (2) Teachers Guide for Instruction - 3 sets
  - (3) Work Books - 3 sets
  - (4) Diagnostic, Formative, Summative Tests - 12 sets
4. The 3rd Small-Scale Demonstration Materials (3rd Grade 8 subject matters)
  - (1) Teacher's Guide for Instruction - 1 set
  - (2) Workbooks - 8 sets
  - (3) Diagnostic, Summative Tests - 16 sets
5. Inquiry Study Materials for Social Studies
  - (1) Teacher's Guide for Instruction - 1 set
  - (2) Workbook - 1 set
  - (3) Diagnostic, Formative, Summative Tests - 4 sets
6. Basic Skills Learning Materials for Middle School (7th, 8th, 9th Grades)
  - (1) Work schedule of essential elements - 30 sets
  - (2) Workbooks - 9 sets
  - (3) Teacher's manual for instruction - 3 sets
  - (4) Demonstration films (16 mm. color) 10 minutes - 9 sets
  - (5) Demonstration films (8 mm. color) 3 minutes - 30 sets
7. Inquiry Study Learning Materials for Nature Study
  - (1) Inquiring into Nature (1-6 grade students use)
  - (2) Teacher's manuals for instruction - 12 sets
8. The 4th Small-Scale Demonstration Materials (5th Grade Language, Moral, Social Studies, Korean History, Nature Study)
  - (1) Teacher's manual for instruction - 1 set
  - (2) Workbook - 6 sets
9. Population Education Materials
  - (1) Guides for Population Education (4-6 grades)
  - (2) Guides for Population Education (Middle School: Social Studies, History, Math, Science, Physical Education, Home Economics)
  - (3) Interesting Population study (students use 4-6 grades)
  - (4) Population Study (Middle School Students use 7-9 grades)
10. Testing materials (4-6 grades, all subject matters covered, preliminary, formative, summative test materials)

VI. Textbooks for High School Students of Air and Correspondence

1. 1974 Academic Year
  - (1) The 1st Semester of the 1st Grade - 14 subject matters edited
  - (2) The 2nd Semester of the 1st Grade - 10 subject matters edited
2. 1975 Academic Year
  - (1) The 1st Semester of the 1st grade - 4 subject matters, revised edition
  - (2) The 2nd Semester of the 1st grade - 2 subject matters, revised edition
  - (3) The 1st Semester of the 2nd grade - 12 subject matters edited
  - (4) The 2nd Semester of the 2nd Grade - 8 subject matters edited

VII. Technical Report and Contracted Research Report

1. Materials for the Development of KEDI Instructional System
  - (1) The comprehensive report of the 1st small-scale tryout for the Development of a New Instructional System
  - (2) The comprehensive report of the 2nd small-scale tryout for the Development of a New Instruction System
2. Study material for specification of curriculum
  - (1) Reports on specification of the elementary-school curriculum
  - (2) Reports on specification of middle-school curriculum
3. Ministry of Education Assignments
  - (1) Long-Range Planning for Supply and Demand of Elementary Secnndary-School Teachers. 1972.
  - (2) A Study of Economic Ways of Experiments and Workshops in Vocational High Schools
  - (3) A Study of the Managerial Improvement for Private Schools
4. Ministry of Science and Technology Assigned Researches
  - (1) A Study of the Standard Facilities and the Design of Workshops for Basic Skills Certificates
5. Contract Research Reports
  - (1) Pre-service teacher training for elementary school
  - (2) Latent curriculum study
  - (3) Vocabulary analysis of the national textbooks for school
6. School Radio Broadcasting Materials
  - (1) Teacher's Guide for School Radiocasting of the 1st semester of the Academic Year 1975
7. Specification of curriculum for high school of air and correspondence
  - (1) The 1st Grade curriculum 1973
  - (2) The 2nd Grade curriculum 1974

VIII. Periodicals

1. KEDI News - No. 1-6, 1972-75
2. Studies in Classroom Teaching - No. 1-8, 1974-75
3. The Journal of Korean Education - No. 1-3, 1974-75

IX. Publications for KEDI Guide

1. KEDI '72
2. KEDI '74
3. KEDI '74-75
4. Educational Broadcasting Bureau
5. The Establishment of Building for Educational Broadcasting
6. Korean Educational Development Institute (1973)
7. Korean Educational Development Institute (1974-75)
8. Korean Educational Development Institute (1975)
9. Yearbook
  - (1) Annual Report (1972-74) Korean Language
  - (2) Annual Report (1972-74) English Language

APPENDIX K  
CRITERIA OF SUCCESS DEVELOPMENT

One major problem faced by an organization in the public sector is the task of influencing how that organization shall be judged. KEDI should perhaps lead the way in the statement and clarification of admissible evidence in the judgmental process. The following is an initial attempt to outline "criteria of success" categories around the question: Does KEDI, in the situation into which it was created and is operational, do what was/is expected in ways which are feasible and practical. The question statement recognizes the dynamics of KEDI's environment and the need for a flexible stance. Within the general criteria, one must develop the kinds of evidence which can be built to answer the question.

For specific KEDI programs, of course, there will be particular attention given to stating objectives and to collecting data around those objectives. The purpose here is to focus attention upon KEDI as a total, complex institutional actor on the Korean educational scene and to assess its corporate performance.

If a framework of success criteria can be developed, it can serve KEDI as a guide to self assessment and provide the basis for anticipating changing perceptions and expectations.

The following outline is incomplete. It is hoped that the study team and Korean experts will contribute to its improvement and eventual utility.

## Criteria of Success - KEDI as Institution

### Category I - Legal-Political Institutionalization Criteria

#### 1. Survival Evidence

- 1.1 continued legal status
- 1.2 funding participation from current sources continuation
- 1.3 funding levels maintenance at current levels in real terms
- 1.4 periodic reaffirmation of KEDI mission by high level government officials
- 1.5 other

#### 2. Recognition - Participation Evidence

- 2.1 role in construction of national plans
- 2.2 representation in national councils
- 2.3 frequency purpose, and kind of official contacts
- 2.4 frequency and kind of attention by media
- 2.5 other

#### 3. Demand for Service Evidence

- 3.1 number of requests from MOE for KEDI to perform specific tasks
- 3.2 requests from provincial officials for inclusion in KEDI programs
- 3.3 requests for data input to non-education agencies
- 3.4 other

### Category II - Professional Institutionalization Criteria

#### 1. Program - Mission Consistency Evidence

- 1.1 number of requests for service accepted related/unrelated to mission statements
- 1.2 number of programs initiated related/unrelated to mission statements

- 1.3 .other
2. Adaptability Evidence
  - 2.1 compatibility of current purposes and current national policy
  - 2.2 frequency of review of goals and objectives and participants in review process
  - 2.3 changes in goals and objectives/reaffirmation of goals and objectives following review
  - 2.4 other
3. Collegiality
  - 3.1 number and kind of interrelationships with professional organizations
  - 3.2 number and kind of arrangements with universities
  - 3.3 availability of Korean experts to KEDI program design and implementation
  - 3.4 number of KEDI personnel involved in other professional organizations
  - 3.5 participation in international organizations
  - 3.6 frequency of visiting observers
  - 3.7 readership of KEDI publications and contributions to KEDI publications
  - 3.8 other
4. Gross Result of KEDI Presence
  - 4.1 effect on educational expenditure data: per pupil, GNP
  - 4.2 effect on problems of educational access and equity
  - 4.3 effect on specific policy and plan statements
  - 4.4 number of KEDI-initiated programs implemented by MOE
  - 4.5 other

**Category III - Professional Performance Criteria**

1. Resource Evidence - Fiscal
  - 1.1 growth in real money support
  - 1.2 success in proposal funding
  - 1.3 results of long-term financing strategies
  - 1.4 effectiveness of budgeting and control procedures
  - 1.5 other
2. Resource Evidence - Human
  - 2.1 numerical adequacy by KEDI program unit
  - 2.2 skill and preparation adequacy
  - 2.3 recruitment and holding of personnel data
  - 2.4 staffing strategies for short term effort
  - 2.5 in-house training
  - 2.6 other training strategies
  - 2.7 other
3. Resource Evidence - Physical
  - 3.1 space adequacy by function
  - 3.2 equipment adequacy by function
  - 3.3 amortization and replacement strategies
4. Operations and Management Effectiveness Evidence
  - 4.1 internal personnel policy adequacy
  - 4.2 clarity of communication channels
  - 4.3 inclusive/exclusive nature of committee structure
  - 4.4 rationality of organizational structure
  - 4.5 clarity of planning and evaluation procedures
  - 4.6 personnel satisfaction data
  - 4.7 other