PERCEPTIONS OF THE IN-SERVICE EDUCATION
NEEDS FOR SECONDARY TEACHERS IN EAST PAKISTAN

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
Sheikh Mohammad Abdun Noor
1965

THESIS

3 1293 10123 1391

This is to certify that the

thesis entitled

PERCEPTIONS OF THE IN-SERVICE EDUCATION

NEEDS FOR SECONDARY TEACHERS IN EAST PAKISTAN

presented by

Sheikh Mohammad Abdun Noor

has been accepted towards fulfillment
of the requirements for

_Ph.D.___ degree in Agricultural Education

Dr. Guy E. Timmons
Major professor

Date September 29, 1965

O-169

R
271

R

0047

ABSTRACT

PERCEPTIONS OF THE IN-SERVICE EDUCATION
NEEDS FOR SECONDARY TEACHERS
IN EAST PAKISTAN

by Sheikh Mohammad Abdun Noor

Purpose: 1. To determine a set of criteria for in-service teacher education in East Pakistan; 2. To analyze the in-service education needs for secondary teachers in East Pakistan as perceived by various administrative and educational groups; 3. To determine a set of standards for salary increases or promotions in East Pakistani schools and 4. To determine the role played by the East Pakistan Education Extension Centre - a primary agency for in-service education of teachers.

Method: The basic data were collected personally through a three month "field trip" to East Pakistan from two hundred twenty-two secondary school teachers, forty-five administrators and thirteen consultants directly or indirectly connected with the in-service education of teachers in East Pakistan. The process of collecting data was mostly accomplished by three different instruments, suited for different purposes and by tape-recorded, personal depth interviews. The data were analyzed mentally, manually and by CD 3600 computer at Michigan State University.

Findings: The administrators rated their need and the need of the teachers for in-service education consistently higher than the teachers in most of the two hundred twenty-six need items. The differences between the administrators and teachers on the relative "degree

of need" of different items were statistically insignificant in most cases. The consultants tended to have greater affinity with the administrators in their perception of those need items where differences between teachers and administrators were considered statistically significant. The teachers expressed great need in the areas of library facilities and curriculum. The administrators expressed great need in the areas of curriculum and personality as an administrator. Organized educational trips, intervisitation of schools, workshops and faculty meetings directed to professional improvement were preferred in-service education activities. Insufficient financial grants, and family responsibilities limited teacher participation in in-service education activities.

Training in teacher training colleges, seniority, and evidence of good teaching were the three major standards on which promotions or salary increases were reported to be determined in most East Pakistani schools.

The East Pakistan Education Extension Centre has made educational progress and has enlarged its responsibilities in spite of many obstacles stemming from ideological conflicts, organizational rivalries and competition.

The differences in thought and perception between administrators and teachers were not significant enough to cause practical problems.

In-service education activities, if arranged at a convenient time for a suitable group with appropriate procedures, would probably be appreciated by its participants and would help to secure the desirable and sought after outcome.

Both administrators and teachers in East Pakistan are satisfied with their profession. However, this satisfaction could advantageously be maximized by means of further incentives, both monetary and non-economic.

AND HE UNTO WHOM WISDOM IS GIVEN,

HE TRULY HATH RECEIVED ABUNDANT GOOD.

Quran, II, 269.

PERCEPTIONS OF THE IN-SERVICE EDUCATION

NEEDS FOR SECONDARY TEACHERS

IN EAST PAKISTAN

By

Sheikh Mohammad Abdun Noor

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

College of Education

1965

THIS WORK IS DEDICATED TO MY PARENTS:

Sheikh Mohammad Patwari

and

Nurunnehar Patwari

When I behold the sacred Liao Wo* my thoughts return
To those who begot me, raised me, and now are tired.
I would repay the bounty they have given me,
But it is as high as the sky: It can never be approached.[1]

*A species of grass symbolizing parenthood
[1]A Chinese poem

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

CHAPTER I

INTRODUCTION

Statement of the Problem

The present study is aimed at a determination of needs of in-service education for teachers of secondary schools, an analysis of the perceptions of administrative and educational groups regarding in-service education needs, and the role played by the East Pakistan Education Extension Centre--a primary agency for in-service education, and thus would provide a basis for future planning in in-service teacher education.

Purpose of the Study

This study was undertaken to determine:

1. A set of criteria for in-service teacher education in East Pakistan.

2. In-service education needs of teachers and administrators of East Pakistan secondary schools as perceived in present day educational thought.

3. In-service education needs of teachers as perceived by teachers.

4. In-service education needs of administrators as perceived by administrators.

5. In-service education needs of teachers as perceived by administrators.

1

6. In-service education needs of administrators as perceived by teachers.

7. The factors which prevent or tend to limit the opportunities for and participation by teachers and administrators in in-service education activities.

8. The role of teachers and the activities that may be included in the teachers' program.

9. The job satisfactions and reactions of teachers and administrators as members of the teaching profession.

10. The conflicts and differences between the administrators and teachers in their perceptions of all in-service education activities.

11. The views of the consultants on specific in-service education needs regarding which administrators and teachers significantly differ.

12. The uniformity or lack of uniformity (consensus or lack of consensus) in the degree of need reported among educators within an occupational group such as teachers and administrators.

13. A set of standards for salary increase or promotion in East Pakistani schools.

14. Aims and objectives of the East Pakistan Education Extension Centre and the extent and scope of its activities in terms of the stated objectives.

15. A pattern of activities and responsibilities for the East Pakistan Education Extension Centre towards meeting the discovered needs.

Basic Hypothesis

The basic hypothesis of this study was as follows: there are differences of practical importance between teachers and administrators of the secondary schools of East Pakistan in the perceived importance of needs for their in-service education.

Assumptions

The present study was based on the following assumptions:

1. That an adequate and effective in-service education program for teachers is an essential part of any educational system.

2. That all persons responsible for education have had exposure to the idea of in-service education. However, they can only benefit by participating in a continuous well-planned educational activity.

3. That all persons responsible for education are anxious to grow educationally and professionally while in the service, if opportunities through in-service education are provided to them, and if proper information about these activities is made available to them.

4. That there exists a need to the extent, quantity and scope of in-service education available in East Pakistan.

The Need and Importance of the Study

Situation

The changing needs and demands of a growing society give rise to the importance of in-service teacher education. The teachers need to deal with a vast ocean of knowledge and skill which is constantly

expanding and changing. In under-developed countries, even more than in developed countries, the educational institutions are extremely tradition bound and tend to be a built-in cultural lag in society. The education of the past and present never meets the educational demands of the future. As the resources of human exploration and endeavor increase day by day, the teacher has to constantly try to maintain himself in the caravan of progress. In-service education for teachers assumes added significance in developing countries.

> . . . the teacher is the architect of the nation's destiny. It is the teacher to whom is entrusted the tender and pliable minds of the young and the privilege and the responsibility of molding and firing them with the loves and loyalties for which they shall live and die.[1]

Dr. Gregorio Hernandez also emphasized

> if the teacher is important because he works for tomorrow, then, with more reason can we say that those who train the teachers are important because they work for today. . . . If the teacher . . . is the architect of a nation's destiny, he who trains the teacher controls that destiny.

Sentiments of this nature have constantly been expressed by educational leaders of the underdeveloped countries but their constant repetition does not in any way lessen their meaning and significance for education. Thus the teacher education institutes perform the pivotal role and their strategic importance to nation building is crucial.

In-service teacher education assumes added significance in Pakistan primarily because of its large number of teachers without professional training of any type, and also because colonial rule placed no premium on

---

[1]Gregorio Hernandez, quoted in The Sixth Milestone: ICA and Education in the Philippines, Annual Report of USOM/ICA in the Philippines, 1958, p. 166.

original creative thinking or self-advancement on the part of the teacher,
which he constantly needs. Pakistan's ambition of becoming equal in all
respects with the great nations of the world is constantly checked prob-
ably due in part to the fact that it possesses one of the most "inadequate
educational systems of the world."[1] Although the leaders recognize that
this problem exists,[2] no substantial effort has been made by them to
correct it. Sharafuddin observed, "But every effort at quantitative
or qualitative improvement in education is being handicapped by the woe-
ful inadequacy of teachers and other educational personnel properly
equipped for the job."[3]

In East Pakistan there are 3,659 secondary schools enrolling
about 424,000 students. However, many of these schools have classes
only up to the 10th grade and have a heavy drop-out rate. An estimated
22,600 teachers teach in these schools. The survey shows one in three
have a Bachelor's or Master's degree, and only one in five is profession-
ally trained.[4] At the very first glance, the number of Bachelor's and
Master's graduates would appear to be reasonably hopeful for an emerg-
ing nation. However, the very nature of the tradition-bound education
to which they have been exposed limits to a great degree their effective-
ness in dealing with the needs and demands of the clientele in accord-
ance with modern educational procedures and practices.

---

[1]A. M. Sharafuddin, "In-Service Teacher Education," East Pakistan
Education Extension Center Bulletin, Vol. 2, No. 2 (October-December,
1962), p. 12.

[2]Government of Pakistan, Planning Commission, The Second Five-
Year Plan (1960-65) (Karachi: Pakistan Government Press, 1960), p. 345.

[3]Sharafuddin, op. cit., p. 12.

[4]Education Directorate, East Pakistan, Report on the Ground Survey
of Educational Institutions in East Pakistan (May 20-June 10, 1960), Part
II (Secondary Education) (Dacca: East Pakistan Government Press, 1961),
p. 5.

The teacher training institutions of East Pakistan at present produce about 400 teachers each year. But tragically this output should be viewed in the light of Pakistan's second five-year plan (1960-65) which aimed to add 15,000 more teachers to the existing 50,000 presently in service.[1] The Planning Commission believes that even with the increased capacity of the teacher-training colleges it would be impossible to train the required number of teacher-trainees. However, "an overall plan for educational improvement could not afford to wait until a whole new generation of trained educators was produced, and efforts to improve the quality of teachers already in service is therefore of crucial importance."[2]

Pakistan's educational situation at present can be compared fairly with the United States in the late nineteenth century, when we find there was an acute shortage of professionally trained teachers. The large-scale programs of in-service education in the so-called "teacher institutes" or normal schools went a long way toward solving the problem. It may be worthwhile for Pakistani educators to learn from the experience of education in the United States.

East Pakistan Education Extension Centre

The Education Extension Centre is a pioneer project established by the Government of Pakistan in cooperation with the University of Chicago in 1959 to foster professional growth among teaching personnel. From January 1960 to February 12, 1965 the Education Extension Centre had conducted 176 courses of one week to nine months duration. These

---

[1]Government of Pakistan, The Second Five-Year Plan (1960-65), op. cit., p. 344.

[2]Sharafuddin, op. cit., p. 13.

courses attempted to offer orientation in our new educational outlook, primarily in its diversification of school curriculum. About 4,384 teachers, school principals, and education officers had participated. The Extension Centre also aims to undertake the conversion of a number of high schools into multipurpose schools and to assist in the training of the specialized staff needed for these schools.

Other Agencies at Work

The following agencies either offer or plan to offer in-service education to the secondary school teachers in cooperation with the Education Extension Centre.

Teacher-training colleges.--The Commission on National Education observed,"The in-service training of teachers will, however, have to be provided in the training colleges. Refresher courses of about two months duration should be organized in training schools and colleges at the district and regional levels."[1] But the training colleges have concentrated their efforts more significantly upon pre-service education than in-service education.

National development training institutes.--These institutes are primarily designed to offer in-service education to the personnel of the Department of Agriculture. But in response to the request made by the East Pakistan Education Extension Centre they have played a pivotal role for the in-service training of vocational agriculture teachers. The training periods for vocational agriculture teachers varied from two

---

[1] Government of Pakistan, Report of the Commission on National Education (Karachi: Pakistan Government Press, 1961), p. 271.

weeks to ten months. The Directorate of Education depends entirely on these institutions for the steady supply of vocational agriculture teachers.

Poly technique Institute, Dacca.--The training of teachers of industrial education is conducted in this institution in addition to its responsibility of teaching technical crafts to the school students.

Pakistan Academy for Rural Development, Comilla.--The Academy is demonstrating the potential role of government officers and also college and secondary school youth and teachers in rural development projects--training, services, organization, financing, agencies to utilize youth.

Pilot secondary schools.--With the help of consultants from the University of Chicago and East Pakistan Education Extension Centre, these twenty-one schools encourage experimentation in curriculum development, testing programs, audio-visual materials, and textbooks. They also offer instruction in agriculture, commercial subjects, home economics, and industrial arts. The schools employ selected trained teachers from all over East Pakistan and aim at a higher quality of instruction in mathematics, science, language usage, social studies, and other aspects of general education. These schools are the best equipped institutions with the professionally best trained personnel in East Pakistan.

In addition, the following institutions have been known to offer in-service education to secondary school teachers but the details are not available at the moment:

1. Institute of Education and Research, Dacca.

2. The British Council, Dacca.

3. East Pakistan Agricultural Institute, Dacca.

4. East Pakistan Agricultural University, Mymensingh.

5. Institute of Fine Arts, Dacca.

6. Chittagong Commercial College.

7. Bengali Academy, Dacca.

8. Audio-Visual Education Centre, Dacca.

The kinds of activities performed in these organizations were: workshops, seminars, practicums, special courses to meet specific needs, and conferences. The activities of the foregoing institutions are being considered in the present study only as they related to the work of the East Pakistan Education Extension Centre.

It may be concluded, accordingly, that in-service education activities for teachers have been in use in East Pakistan for a considerable length of time. But the effectiveness and impact of these activities have not been ascertained. The present writer is not aware of any study having been made to identify the in-service educational needs of secondary school teachers. Nor is he aware of any study having been conducted to determine the effectiveness and impact of the in-service education activities which have so far been carried out. In the absence of such essential information it is doubtful that a comprehensive program of in-service education can be designed to satisfactorily and effectively meet these needs of all secondary school teachers in East Pakistan. The present study is aimed to partially fulfill this gap. It is hoped that the present study would begin to provide some of the basic factual identification of some of the factors that would permit improvement of in-service education of teachers in East Pakistan.

Sources of Data

The sample of the present study was drawn from the following groups.*

---

*See Chapter IV, p.52.

Administrators

The sample of administrators was divided into two broad groups.

Staff administrators.--This included the personnel from the following three categories, directly or indirectly related to the' planning or execution or any other activities of in-service education for teachers, but who have an advisory, or staff, or vicarious relationship to the schools:

1. Officials of the Department of Education.

2. Heads of the cooperating agencies.

3. Personnel of the Education Extension Centre.

Line administrators.--This included personnel from the following two categories who are in charge of day to day affairs of schools and have direct or indirect line relationship to the school system:

1. Headmasters of schools.

2. Inspectors of schools.

Secondary School Teachers

This sample was composed of members of the teaching staffs of secondary schools regardless of the degree possessed, training received, status held or subjects taught.

Educators and Consultants

This sample was composed of persons who are directly or indirectly connected to the in-service teacher education program of East Pakistan, but are also closely related either to the pre-service education program or have an appreciable influence over the plans and policies of the government. The opinion of this sample was assessed whenever significant differences occurred between responses of teachers and administrators.

1. Recognized Pakistani educators.

2. Consultants from non-indigenous universities or agencies such
   as American universities, UNESCO, USOM/AID, British Council.

Procedure for Collecting Data

The present study was conducted in the following phases:

1. An extensive search of available materials in both English
   and Pakistani languages in the educational institutions of
   the United States and Pakistan, for setting forth the criteria
   of in-service education which provided the framework of the
   study.

2. An analysis and synthesis of the above material.

3. Evaluative instruments and questionnaires developed by the
   investigator and administered personally to the population
   included in the sample.

4. A series of personal depth-interviews with administrators,
   educators, consultants, and selected teachers.

Methodology for Collecting Data

The necessary data and evidences were collected in the following
steps. Although effort was made to follow the "sequential-step" signifi-
cance, it was not always practical, for obvious reasons.

1. Identification of a set of criteria for in-service teacher
   education in East Pakistan based upon known generalizations
   of learning.

2. Development of a questionnaire, construction of interview

   form with specific questions, and instruments, in light of

   the criteria formulated.

3. Pre-test of each instrument with a very limited group in

   order to measure its applicability, reliability and validity.

   Appropriate changes were made after the pre-test was com-

   pleted.

4. Ascertainment of the relative emphasis given to each of the

   criteria and seeking the importance of each criterion in the

   organization of in-service education in East Pakistan.

The above four steps were initiated prior to departure for East Pakistan.

5. In East Pakistan the following three different approaches

   were used to collect the data: (a) personal depth interview;

   (b) educational documents, records, literature, etc.; and (c)

   structured and opinion instruments.

6. Private discussions were made with sample individuals to

   check and further analyze certain situations whenever needed.

The study involved approximately a three-month data collecting

trip to East Pakistan. Upon completion of the field work, the analysis

of data was completed in the United States, as well as the writing of

the dissertation.

Reasons for Collecting Data Personally

The following were some reasons for collection of the data through

a personal visit to East Pakistan.

1. A search of pertinent sources indicated that no similar study

   of teacher education had been made in East Pakistan

2. Much of the physical and documentary evidence required for the study was expected to be difficult, if not impossible, to obtain from persons unexposed to teacher education.

3. Many of the needed material evidences were deposited with individual organizations in the form of school reports and value judgments of involved personnel, which would require extensive investigation.

4. The very nature of the study required the working of a full-time researcher with considerable background in education for an appreciable length of time.

5. The scope and importance of teacher education in modern life and culture makes it imperative that the aims, purposes, procedures, and results of an educational experiment of the magnitude envisioned by this research design, be studied and evaluated personally in order to provide a basis for future developments.

6. Past experience in attempting to obtain by mail the type of data involved was considerably less than successful.

Definition of Terms

In-Service Education

A number of terms have been used to define the process of upgrading and enriching individuals who are legally incorporated to manage the affairs of an organization. An assessment of the literature relative to general principles of in-service education discloses varied interpretations of terminology and differing views of influences. Several terms are used interchangeably. "In-service training," "in-service education," "improvement

programs," "enrichment," "refresher courses," and "continuing education"
are interchanged most often. "In-service education" seems most applicable
for this study. The hyphenated form"in-service" rather than the non-hy-
phenated "in service" will be used except when quoting directly.

Consultants: refers to personnel from non-indigeneous universities,
UNESCO, USOM/AID, and the British Council, directly concerned with the
education of teachers.

Educator(s): refers to persons who are not directly connected
in any way to the in-service education of teachers in East Pakistan, but
who are closely related either to the pre-service education program for
teachers or have an appreciable influence on the plans and policies of
the government of East Pakistan for education.

In-Service Education Acitivity: means and includes any formalized
activity for the purpose of improving teachers professional skills and
abilities in performing their duties. It may refer to any or all devices
or techniques used such as conferences, conventions, meetings, workshops,
seminars, demonstrations, and educational trips.

In-Service Education or Training.--used interchangeably to refer
to the programs which are designed to encourage and promote education of
teachers on the job.

Interschool Visits: refers to visits made by individuals or groups
of teachers from one school to another for purposes of observing practices,
facilities, and other professional and social aspects of the school pro-
gram of the host school.

Line Administrator(s): refers to personnel who are in charge of
day to day affairs of secondary schools and have direct or indirect line
relationships with the school system. Specifically the term refers to
Headmasters of secondary schools and Inspectors of schools.

<u>Professionally Trained Teacher(s)</u>: refers to graduates of a teachers training college.

<u>Professionally Untrained Teacher(s)</u>: refers to individual teacher(s) who have not attended a teachers training college.

<u>Respondent(s)</u>: refers to the member(s) used in the population sample.

<u>Secondary School(s) or Secondary High School(s)</u>: refers to any school offering instructions from Class VI to Class X whether classified as rural or urban, boys or girls, pilot or non-pilot, government or non-government school. They are used interchangeably.

<u>Staff Administrator(s)</u>: refers to personnel, directly or indirectly related to the planning, execution or any other activity of in-service education for teachers, but who have an advisory, or vicarious relationship with schools. Specifically the term refers to officials of the Directorate of Public Instruction, Heads of the cooperating agencies, and faculty of East Pakistan Education Extension Centre.

<u>Teacher or Teachers of Secondary Schools</u>: is applied to any member of the teaching staff of secondary schools regardless of the degree possessed, training received, status held, or subjects taught.

<div align="center">

<u>Organization of the Remainder
of the Report</u>

</div>

The present chapter has dealt with a description of the research problem; the establishment of significance for conducting the study, sources of data, methodology for collecting data, reasons for collecting data personally, and definition of terms.

Chapter II contains a review of the literature and research findings bearing upon the present problem.

Chapter III presents the formulation and a detailed discussion of ten basic criteria for in-service teacher education that are to be used in this study.

Chapter IV presents the methodology used in the construction and distribution of instruments and in the collection of the data, and the procedures used in the analysis of the data.

Chapter V presents the data and analyzes the findings.

Chapter VI summarizes the findings, draws conclusions, makes recommendations, and suggests desirable directions for future research.

CHAPTER II

REVIEW OF LITERATURE

An examination of the literature reveals that extensive materials

have been written on the in-service education of school personnel. The

educators recognized that planned programs in in-service education are

essential to adequate professional improvement of school personnel. How-

ever, little has been written on in-service educational needs and tech-

niques of secondary school teachers in developing countries of the world.

Literature that is pertinent to the problem under consideration has been

included in the review and classified into four groups.

**A. Review of Literature on Importance
of In-Service Education**

Hass[1] states that the major reason for in-service education is

to promote the continuous improvement of the total professional staff

of the school system. This is necessary because pre-service education

may not adequately prepare the professional staff for their responsibil-

ities, and because of the need for maintenance of familiarity with new

knowledge and subject matter, improved teaching methods, and increased

understanding of human growth and learning. Factors like rapid cultural

and social changes, which characterize modern times, and the rapid cur-

riculum changes necessitated by these developments require that in-service

education be a continual process.

---

[1]Glenn C. Hass, "In-Service Education Today," In-Service Educa-
tion: The Fifty-Sixth Yearbook of the National Society for the Study of
the National Society for the Study of Education (Chicago, Illinois:
University of Chicago Press, 1957), Chapter III, pp. 13-34.

Kinnick <u>et al.</u>[1] offer a few generalizations for the in-service education program which denote some of its positive aspects and some possible pitfalls.

1. In-service education means a program by which <u>all persons</u> engaged in education learn and grow together and not a program for making up teacher deficiencies.

2. The emotional climate which prevails in the in-service program is as important as the goals sought and largely determines the goals attained.

3. Teachers should have some part in setting up programs of in-service education.

4. Individual differences among teachers should be recognized in setting up in-service educationplans.

5. A primary purpose of in-service programs should be the development by every participant of a sensitivity to the viewpoints of others.

6. Good communications at each level and between all levels of the school society are necessary for the maximum success of the in-service guidelines in action.

7. Conflicts between administrative values and goal values are more easily resolved when discussed frankly by teachers and administrators.

Hefferman[2] considers that professional pre-service education should never be a <u>fait accompli</u>. A teacher who does not want to be hopelessly

---

[1]B. Jo Kinnick <u>et al.</u>, "The Teachers and the In-Service Education Program," <u>In-Service Education: The Fifty-Sixth Yearbook of the National Society for the Study of Education</u> (Chicago, Illinois: University of Chicago Press, 1957), Chapter VI, pp. 131-152.

[2]Helen Hefferman, "In-Service Education of Teachers in the Modern School," <u>California Journal of Elementary Education</u>, XXV (August, 1960),p.1.

lost in the new material and methods emerging from systematic research and experimentation must increasingly direct his efforts to keeping himself abreast of educational progress.

Misner[1] believes that a well-planned, in-service education program could be the solution for the present and probable future inadequacies of in-service education and subsequent higher achievement in more effective teaching.

Ade[2] notes that no matter how extensive and elaborate the training and preparation of teachers in colleges or universities, it does not end the need for further preparation and education.

Gray[3] believes that the present need for continued in-service education is more due to the continual change and emergence of educational problems than the presence of ineffective pre-service education of teachers.

Hass[4] agreed with Gray but emphasized that rapid curriculum changes are the most important factor necessitating in-service education.

Conant's[5] arguments for in-service education are three-fold. First, the teacher should continue to grow intellectually; second, the teacher

---

[1]Paul J. Misner, "In-Service Education Comes of Age," Journal of Teacher Education, I, No. 1, (March, 1950) p. 32.

[2]Lester K. Ade, In-Service Education of Teachers, Bulletin No. 155 (Harrisburg, Pennsylvania: Department of Public Instruction, 1939), p. 23.

[3]W. S. Gray, "The Professional Education of College Teachers," The Study of College Instruction, National Society of College Teachers of Education Yearbook, XXVII (Chicago, Illinois: University of Chicago Press, 1939), pp. 248-266.

[4]Hass, op. cit., p. 33.

[5]James B. Conant, The Education of American Teachers (New York: McGraw-Hill Book Company, Inc., 1963), p. 191.

is never adequately prepared in a four-year course and further preparation
is desirable; third, a teacher needs to be kept up to date regarding new
developments.

Barr, Burton, and Brueckner[1] agree that the expressed inadequacies
of institutional training of teachers and growing awareness of the com-
plexity of practical teaching lead to the need for continuous study of
teaching.

Giesller, Dohrens, and Dobinson[2] together in a UNESCO report em-
phasized the idea that future leaders, having successfully completed an
academic course in school and some also in a university, are still in
need of education, particularly social education. Training, taken to
include methodology, school practice, a study of the history and national
systems of education, etc., is essential but is not enough.

Truitt[3] suggests a list of five precepts for assessment and evalua-
tion of in-service education of student personnel programs. However, only
three of them seem to be significant for this study.

1. The effectiveness of an in-service training program can be
   evaluated only in relationship to its goals--the philosophy
   of the organization.

2. Definite procedures must be established to interpret into the
   training program the results gained through evaluation.

[1]A. S. Barr, William H. Burton, and Leo J. Brueckner, Supervision
(New York: D. Appleton Century Company, 1938), p. 639.

[2]The UNESCO Institute for Education - Hamburg, The Education and
Training of Teachers for Primary Schools. (Hamburg, 1957), p. 75.

[3]John W. Truitt, "In-Service Training Programs for Student Personnel
Workers," Denver, Colorado, April, 1961, 14 pp.

3. Philosophy, program, and policy are essentials of an effective
    in-service training program, but the greatest asset by far is
    the individual staff worker.

In 1947, the U.S. President's Commission on Higher Education[1] urged
the development of carefully planned, comprehensive programs of in-service
enrichment to strengthen teaching on every college and university campus.
The commission stressed three broad, basic principles of in-service educa-
tion.

1. In-service education cannot be left to chance; it must be a
    planned program.

2. No one pattern of in-service education is universally applicable
    to all institutions.

3. The use of a variety of techniques and activities characterizes
    successful improvement programs.

Parker[2] believes that the final goals of in-service education
activities are learning, change, and improvement. So all activities should
be of significance to all persons involved. He suggests that if activities
are to be effective, someone has to learn something. This means that
guidelines for planning, organizing, and conducting in-service education
programs are based, of necessity, upon sound principles of learning.

Summary

That there is a greater need for in-service education programs is
rarely contested. Educators seem to agree that education is an investment

---

[1]President's Commission on Higher Education, Higher Education for
American Democracy (Washington, D.C.: Department of Health, Education, and
Welfare, 1947).

[2]J. Cecil Parker, "Guidelines for In-Service Education," In-Service
Education: The Fifty-Sixth Yearbook of the National Society for the Study
of Education (Chicago: University of Chicago Press, 1957), Chapter V, pp.
103-128.

in human resources and this investment should continue as a life-long process. The programmatic activity of the learning of eduoators should not be solely confined to the limited period of their attendance in a pre-service training institution, but should continue beyond its boundaries. The increased, ever-changing knowledge on human growth and behavior, the inadequacies of pre-service education, the growing awareness of the complexity of teaching, the need of a well-planned program of education, rapid curriculum changes, and absence of a universally applicable educational policy and program are some of the factors that make in-service education a necessity.

B. Review of Literature on In-Service Educational Techniques and Needs

Corey[1] suggests an organization for in-service education that is quite different. The proposed organization should provide maximum opportunity to learners to:

> (a) identify the particular problems on which they want to work; (b) get together to work on those problems in ways that seem most productive to the group; (c) have access to a variety of needed resources; (d) try out in real situations, those modifications, which in practice, give a prior promise; and (e) apprise and generalize from the consequence.

Lewis et al.[2] state that the goal of an in-service education program must be concerned with helping professional personnel develop the attitudes, understandings, and skills that will enable them to provide a better program of education.

---

[1]Stephen M. Corey, "Introduction," In-Service Education: The Fifty-Sixth Yearbook of the National Society for the Study of Education (Chicago: The University of Chicago Press, 1957), Chapter 1, pp. 1-12.

[2]Arthur J. Lewis et al.,"The Role of the Administrator of In-Service Education," In-Service Education: The Fifty-Sixth Yearbook of the National Society for the Study of Education (Chicago: University of Chicago Press, 1957), Chapter VII, pp. 153-173.

Morphet, Johns, and Keller[1] point out that for a good in-service education program there exists no clear-cut panacea; and one single approach is not sufficient to meet the problems and needs of the teachers which constantly differ. Appropriate procedures need to be devised and developed to meet the peculiar needs and problems of each particular group. However, good planning, a competent staff, and constructive human relations are basic to a satisfactory training program.

Gilchrist[2] suggested the following six basic factors as necessary for effective in-service education.

1. In-service education should cause people to change and to grow.

2. Individual and collective appraisal and evaluation should determine the starting point for in-service education.

3. In-service education should be planned in terms of the demands of society, the values which society cherishes and wants to preserve, the available body of knowledge on how children learn and the developing needs of children, adolescents, and young adults.

4. In-service education programs should be centered around the individual problems of individual teachers.

5. In-service education programs should discover and utilize all the necessary resources.

6. In-service education programs should have constant communication with the community.

---

[1]Edgar L. Morphet, Roe L. Johns, and Florence L. Keller, _Educational Concepts, Practices, and Issues_ (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1959), pp. 315-317.

[2]Robert S. Gilchrist, "Highway to Quality Teaching," _National Education Association Journal_, XLVII (May, 1959), pp. 18-19.

Fowler[1] stated that if teachers are to become real leaders in their respective schools, they must be provided with a program of in-service training which is concerned with "doing" and not merely "listening."

Weber's[2] study indicated that the most promising techniques of in-service education are those which give teachers a large share in shaping policies, in planning, and in conducting meetings.

Weber[3] also concluded, in another study, that lack of time, heavy teaching loads, unprofessional attitudes of teachers, and conflicts of personality between teachers and between teachers and administrators, are some of the major obstacles occurring in a program of in-service education.

Antell and Stahl[4] believe that teachers' morale is the most important factor in an effective in-service teacher education program. Unless the teachers feel the urge to move ahead and do their best, the program will be a failure.

Swearingen[5] found that it is in the areas of guidance and special projects that teachers most frequently feel a need for in-service education.

[1]George W. Fowler, "Purposeful Program of Teacher Training," National Education Association Journal, (1957) p. 380.

[2]C. A. Weber, "Reactions of Teachers to In-Service Education in Their Schools," School Review, April, 1940, p. 247.

[3]C. A. Weber, "Obstacles to be Overcome in a Program of Education for Teachers in Service," Educational Administration and Supervision, December, 1942, pp. 425-430.

[4]Henry Antell and Edgar Stahl, "What Constitutes An Effective In-Service Education Program?" Bulletin of the National Association of Secondary School Principals, XL (April, 1956), pp. 147-152.

[5]Swearingen, "Developing Bases for Education of Supervisors in Florida " (unpublished Ph.D. dissertation, Ohio State University, 1950).

Other priority needs are opportunities for coordination of efforts and cooperative planning, and interpretation of program to the public.

The Commission on Teacher Education of the American Council on Education,[1] in a nation-wide study on teacher improvement (1939-44), identified some areas in which teachers have the most in-service education needs. They are: child development, community understanding, personal development, and curriculum construction and evaluation. Study groups, workshops and use of outside consultants were the most generally used techniques for in-service education.

Taylor's[2] study denotes that the schools employing greater numbers of teachers and located in the larger and wealthier cities tend to have a greater number of selected techniques for in-service teacher education programs. He thus concluded that wealth was a principal factor influencing in-service education programs.

Prall and Cushman[3] stated:

> In summary, we believe that the experience with the schools in the cooperative study has demonstrated that, given proper conditions, teachers will readily join together in an effort to do better what they conceive to be their jobs; that when people go to work on jobs that to them seem important, personal growth and program improvement become closely related; and, that given proper conditions, the teachers' conceptions of their jobs will broaden and also come to relate more closely to the needs of contemporary society.

[1]Maurice E. Troyer and C. Robert Pace, "Evaluation in Teacher Education," Teacher Education In Service. Prepared for the Commission on Teacher Education (Washington: American Council on Education, 1944), pp. 248-304.

[2]Bob L. Taylor, "Factors Affecting In-Service Teacher Education Programs," Journal of Educational Research (May, 1959), pp. 336-338.

[3]Charles E. Prall and C. Leslie Cushman, Teacher Education In Service. Prepared for the Commission on Teacher Education (Washington: American Council on Teacher Education, 1944), pp. 441-442.

<u>Summary</u>

The techniques of in-service education vary with the needs of the participants in a particular situation. The activities of in-service education do not promise a panacea for all situations. Appropriate methods need to be devised and developed to meet the corresponding needs. But educators agree that effective in-service education programs should make efforts for planned change and growth, have all participants shape plans and policies, and encourage activities that are more concerned with doing than listening. All these steps involve the concept of good planning. In-service education needs seem to be prominent in the fields of guidance, subject matter, child development, community understanding, personal development, curriculum construction, and evaluation and general knowledge in education.

C. Review of Literature on Some Selected Research Studies on In-Service Education

Santiago[1] stated that teachers in Manila felt that they were not offered enough external incentives to encourage them to grow professionally; that the relatively extensive participation of teachers in faculty meetings and group conferences with supervisors was to a great degree required rather than voluntary; that several in-service training techniques were utilized, but techniques involving cooperative action were rarely used; that the extent of teacher participation in in-service training activities depended largely on the extent of the offering of in-service

---

[1]Alicia A. Santiago, "A Study of the In-Service Education of Public Secondary School Teachers in Manila, Philippines" (unpublished Ed.D. dissertation, Indiana University, 1957). <u>Dissertation Abstracts</u>, 18, No. 2 (Ann Arbor, Michigan: University Microfilms Inc., February, 1958), p. 515.

activities by the school. Various in-service techniques generally recog-

nized by authorities as effective were used but only on a limited basis.

The importance of providing professional library facilities to the teachers

was evidenced by the results of the study. Workshops and conventions or

conferences, when offered, were fairly well participated in by the teachers.

Great importance was attached to the leadership provided by the central

office of the Bureau of Public Schools in providing in-service training

activities to the teachers outside of their schools. The teachers rated

the in-service training programs, which they attended, fairly high. The

most highly rated technique was the use of teaching aids (audio-visual)

such as educational films. However, this technique was the least used.

The problems rated most important were: first, lack of instructional

materials; and second, language difficulty of students.

Taylor[1] studied the status of in-service teacher education in

public high schools in Indiana. He found that teachers took an active

part in faculty meetings, but they did not plan them; teachers were

active in curriculum improvements but worked individually rather than

cooperatively; the most widely used techniques of in-service education

were related to teacher welfare; schools in wealthier areas used the

greatest number of different selected techniques; both principals and

teachers showed great interest in in-service education; teachers and

principals agreed closely as to the status of in-service teacher educa-

tion programs in Indiana; and the emphasis was on the well-being rather

than on the professional competency of the teachers.

---

[1]Bob Leslie Taylor, "The Status of In-Service Teacher Education
in The Public Senior High Schools of the State of Indiana" (unpublished
Ed.D. thesis, University of Indiana, 1957). Dissertation Abstracts, 18,
No. 2 (Ann Arbor: University Microfilms Inc., 1958), pp. 515-516.

Sudershanam's[1] study indicated that administrators and teachers
of Andra Pradesh State, India, equally emphasized the need of in-service
education forcontinuous growth. He noted that participation by teachers
is more dependent on internal factors, the inner urge, than on external
stimulation; i.e., encouragement and incentives provided by the local
school administration. Some of the major problems were due to the lack
of cooperation and coordination among the various leaders of local pro-
grams and between the Director of Public Instruction on one hand and
teacher-training colleges on the other. Some of the in-service education
activities most appreciated by the teachers are educational trips, study
leaves, panel discussions, seminars, visiting classes and schools, meet-
ing educators from foreign countries, educational research, evaluation
programs, refresher courses, study groups, participation in group activit-
ies, reading of professional literature, and individual and group con-
ferences with administrators. Sudershanam recommended that the needs of
teachers be identified, analyzed, and evaluated and appropriate programs
be formulated and conducted to meet them.

Deems'[2] study showed that the teachers ranked workshops, inform-
ational sources, consultative services, and graduate courses (in that

---

[1]Ratna Sudershanam, "A Study of In-Service Teacher Education of
Secondary School Teachers in Andra Pradesh State, India" (unpublished
Ed.D. thesis, Indiana University, 1958). Dissertation Abstracts, 19,
No. 12 (Ann Arbor: University Microfilms Inc., June, 1959), pp. 3240-3241.

[2]Howard M. Deems, "An Evaluation of The In-Service Program Provided
by The University of Nebraska For Teachers of Vocational Agriculture"
(unpublished Ed.D. thesis, University of Missouri, 1956), 260 pp. Summaries
of studies in Agricultural Education, Supplement No. 10, Vocational Division
Bulletin No. 265, Agricultural Series, No. 69 (Washington: United States
Department of Health, Education, and Welfare, 1957), p. 28.

order) as the most important devices used. The needs of teachers were

ranked in the following order: (1) new developments in agriculture,

(2) development of skills in farm mechanics, (3) training in organizing

and using advisory councils, (4) training in organizing and conducting

young and adult farm classes, (5) instruction in guidance and educational

psychology, and (6) training in the use of proper techniques of publicity.

Deems noted that teacher training institutions do not necessarily provide

in-service training in the areas of greatest need for teachers. Deems'

other recommendations were: teacher training institutions should make

in-service education a definite part of the total educational program;

definite plans and policies should be formulated; and adequate finances

and facilities should be provided. He also suggested that a complete in-

service program should include professional and technical graduate courses

both on and off campus at a time convenient to teachers, workshops (both

on and off campus), informational services of proper scope and variety,

and consultative services for all teachers. A research program should

be instituted and teaching aids provided to teachers.

Diggs[1] indicated that four techniques were extensively used for

in-service education of teachers of vocational agriculture in Virginia.

They are: full-time residence in college, full-time summer session,

three-week short courses, and extension and week-end courses with credits.

Teaching experience had no apparent effect on the attendance of teachers

at workshops, but a relationship existed between experience and assistance

---

[1]Kermit Hunter Diggs, "In-Service Education of Teachers of Voca-
tional Agriculture in Virginia (unpublished Ed.D. thesis, Cornell Univer-
sity, 1957). Summaries of studies in Agricultural Education, Supplement
No. 12, Vocational Division Bulletin No. 275, Agriculture Series, No.
72 (Washington: United States Department of Health, Education, and Welfare,
1959), pp. 17-18.

received from supervisors or teacher trainers. The number of problems discussed varied inversely with the increase in experience. Lack of time limited the frequency of participation by teachers in in-service training programs. Finance and distance were also important factors limiting the pursuit of credit courses.

Horner's[1] study showed that the most important item of need expressed by teachers was "having in-service education opportunities conveniently available." Three-fourths of the teachers need assistance in keeping up to date on information and techniques for effective teaching. Teachers expressed the highest needs regarding subject matter. The in-service program was found to be weak in: policy and planning, budget provisions, supply of new information, and technical off campus courses. It was found to be strong in facilities, visits to first-year teachers, and workshops. Teachers' evaluation of in-service education programs differed from the evaluation by educators. The most effective in-service media were: workshops, small group meetings, subject matter specialists, short courses, and extension courses.

Santos'[2] study indicated that teachers expressed a priority for assistance in the areas of research and experimentation, subject matter content, methods, co-curricular activities, general education, and administration and supervision. Administrators expressed a need for in-service training in the fields of administration, supervision, curriculum,

---

[1]James T. Horner, "An Evaluation of The In-Service Education Program Provided for Teachers of Vocational Agriculture by North Carolina State College" (unpublished Ed.D. dissertation, Columbia, Missouri: University of Missouri, 1959), 209 pp. Summaries of studies in Agricultural Education, Supplement No. 13, Vocational Division Bulletin, No. 282, Agriculture Series, No. 75 (Washington: United States Department of Health, Education and Welfare, pp. 48-49.

[2]Bruno M. Santos, "An Analysis of The In-Service Training Needs and Participation in In-Service Training Programs by Teachers of Agricultural Schools of the Philippines" (unpublished Ed.D. dissertation, East Lansing: Michigan State University, 1961), 213 pp.

guidance, and public relations. Workshops, conferences, and demonstrations were the techniques commonly used in in-service programs. The participation by teachers and administrators was directly related to years of tenure up to fifteen and twenty years, respectively, and inversely related thereafter. Limited opportunity, lack of funds, subject not in interest field, and family responsibilities were the most important reasons why teachers had limited participation in in-service training activities. In-service programs held in the past were judged as generally effective but inadequate and limited in scope. Santos finally concluded that time, finance, and certain regulations appear to be the major sources of impediments limiting the number and frequency of in-service training activities provided and the participation by teachers in these programs.

Tandoc[1] stated that the most important factors which determined the content of the in-service education program were the needs, interests, and problems of teachers. The needs of the teachers involved teaching equipment and materials, professional improvement, procedures in teaching, program planning, evaluation of the program, and student progress. The in-service teacher education program had provisions for: (a) taking care of teachers with varying abilities in several ways, and (b) checking program accomplishment and teacher growth. Intervisitation was the most common, and correspondence work was the least chosen learning experience for in-service education. Tandoc believed that the adequacies of the program were: (a) the undertaking was cooperative and based upon the existing social environment, (b) flexibility of operation was provided, (c) the

---

[1]Florangel Sevidal Tandoc, "Suggestions for Improving the In-Service Education Program of High School Home Economics Teachers in Luzon, Philippines" (unpublished Ph.D. dissertation, East Lansing: Michigan State University, 1962), 139 pp.

local school system contributed a great deal to the creation of a suitable learning environment, (d) the variety of learning experiences provided contributed to the attainment of several purposes, and (e) methods were centered on group action. The inadequacies of the program were: (a) it lacked emphasis upon local school responsibility, (b) individuals were singled out for leadership, (c) program evaluation was limited in type and use, (d) the program did not tend to improve the processes and products of instruction, and (e) participation of teachers in the planning process was limited.

Herron's[1] study identified several characteristics of an effective in-service education activity, of which the following seem to be essential:

1. There are general procedures and basic principles involved in the inauguration of an in-service education program.

2. An in-service education program, to operate successfully, must be designed to function within the objectives of the college.

3. Flexibility is essential in structuring a program for in-service education activities; however, rigid formulation does not necessarily preclude success in in-service education activities.

4. In-service education programs can be implemented and continued without large expenditures of money.

---

[1]Orley R. Herron, Jr., "A Study of In-Service Education Programs for Boards of Trustees in Selected Colleges and Universities in The United States" (unpublished Ph.D. dissertation, East Lansing: Michigan State University, 1965), 177 pp.

Summary

Research studies seem to indicate that the most essential features of in-service educational opportunities be conveniently available, and that the program be based on the needs, interests, and problems of the participants. While the participants attended activities because of an inner urge for learning rather than external stimulation, the attendance seemed to be required rather than voluntary. Participants usually did not have a share in planning, they worked individually rather than cooperatively, training was not necessarily provided in the field of greatest need, and there was an absence of cooperation and coordination in planning of in-service education activities exists.

D. Review of Literature and Officials' Views On In-Service Education in Pakistan and India

"Let us create in our educational institutions a high calibre teaching staff, satisfied with their lot and dedicated to their profession,"[1] urged Ferdouse Khan, Chairman of the Board of Intermediate and Secondary Education, Dacca. He emphasized that the creation of a "high calibre" teaching staff is only possible through constant refresher courses.[2]

Mr. A. Rab Chowdhury, C.S.P., Deputy Secretary, Department of Education, Government of East Pakistan, commented,

> We think that the growing purpose behind all teacher training programs is to train teachers and qualify them constantly by refresher courses in a specific teacher training institution. Education being a dynamic subject, the refresher courses are not a luxury,

---

[1]Md. Ferdouse Khan, "Some Urgent Problems in Education," Presidential Address, Education and Social Sciences Section, Seventh Pakistan Science Conference, Karachi, February, 1965,p.7.

[2]In a tape recorded discussion session with the researcher at Dacca, March, 1965.

but a necessity. Attendance in refresher courses should not be complete by itself; it should be continued through follow up.[1]

Moktader[2] observed that:

good teaching should never be viewed as something to be achieved once for all and never to be worried about again. It is an art never fully attained and never to be "put away on ice." A good school must provide for the continuous growth of its professional staff.

The principal[3] of the Central Teacher Training College at Lahore emphasized that mastery over the subject matter alone was not sufficient for teaching. Command over methodology, an acquaintance with professional literature, and a careful study of the prevalent social conditions are essential for successful teaching. Rapid change characterizes contemporary human affairs. As the definition and scope of various subjects are continuously changing, and as the techniques of teaching are constantly developing, maximum service to the student community can be rendered only if the teacher keeps on adjusting himself to new concepts.

The Director[4] of Public Instruction of West Pakistan observed that a teacher has to be constantly alert in a shifting situation. There is no doubt that some people are born teachers--perhaps they are interested

---

[1]In a tape recorded discussion session with the researcher at Dacca, March, 1965.

[2]M. A. Moktader, "Introduction," East Pakistan Education Extension Centre Bulletin (Dacca: East Pakistan Government Press, Vol. 1, No. 4, December 1960 to February, 1962), p. 1.

[3]M. A. Makhdumi, "Welcome Speech," The Proceedings of the In-Service Education Course for Lecturers of Intermediate Classes (Lahore: Central Training College, 1958), p. 99.

[4]Professor Sirajuddin, "Inaugral Address," The Proceedings of the In-Service Education Course for Lecturers of Intermediate Classes (Lahore: Central Training College, 1958), p. 13.

in other human beings, or because they have an inner urge to teach. But

even with a native aptitude, one has to develop the natural gift, and

hence, there is the need for training. The gifted man may indulge in

idiosyncrasies. Whether a person is engaged as a teacher, a lecturer,

or a professor, training is necessary for all categories.

Kirpal[1] observed that the educational growth of a teacher is a two-

way process: first, he is prepared for his task before he enters the

profession; and second, he is prepared again and again to keep abreast of

current demands by periodical refresher training. The most successful

educational enterprise is that which narrows the gap between the pre-

service and the in-service training, so that ultimately, in-service train-

ing does not merely have to repair the lag in pre-service training, but

it is also able to build further upon it. Kirpal also observed that it

is not the money or physical facilities, or even the quality of the train-

ing college that determine the excellence, but it is the confidence, faith,

determination, vitality, understanding and sympathy of the teaching per-

sonnel which determine the success of a program.

Dr. Shrimali[2] observed that the human factor in all educational

processes is of the greatest importance. If teachers begin to feel that

there is somebody who is trying to find fault with them, they are likely

to develop resistance. In one instance, Dr. Shrimali explains that the

teachers came for discussions, meetings, seminars, conferences, and the

---

[1]P. N. Kirpal, "In-Service Training of Teachers," Teacher Education, (New Delhi: The Directorate of Extension Programs for Secondary Education), VI, Nos. 3 and 4 (March, April, 1962), p. 8.

[2]K. L. Shrimali, "The Improvement of the Teacher," Teacher Education (New Delhi: The Directorate of Extension Programs for Secondary Education), VI, Nos. 3 and 4 (March, April, 1962), p. 94.

state gave them all kinds of facilities, but still there was a lurking

fear in their minds that something was being imposed on them and this

had developed resistance. And so, Dr. Shrimali concludes:

> In all your programs the human factor is the most important and unless you tackle your problems in a human way, it will be difficult to achieve progress however efficient you may be in your work and whatever skills you may have acquired.

A UNESCO[1] report stated that:

> Top priority should be given to plans for the expansion of teacher training facilities with the aim of reducing the number of inadequately trained teachers in the shortest possible time and of meeting the expanding needs of primary education.

> With a view to meeting the needs of rural areas, the teacher training institutions should be set up in rural areas, when-ever necessary. Such institutions would be in a better position not only to attract people from the rural areas, but also to provide training suited to the needs of rural schools.

Sentiments of this nature have been expressed in official documents

of the Pakistan government. The Commission on National Education, 1959,

recognized that "no system of education is better than its teachers."[2]

They further recommended that:

> Apart from the fact that large numbers of our teachers at all levels are untrained, and continued and vigorous efforts are thus needed to equip them professionally for their work, it must be recognized that no teacher once trained can, throughout his career, be regarded as fully competent without periodic refresher courses. It is time for us also to stop treating refresher courses as a luxury and to accept them as a necessity if educational standards are to be raised and maintained.[3]

---

[1]UNESCO Report on the Regional Meeting of Representatives of Asian Member States on Primary and Compulsory Education. Karachi, December, 1959-January, 1960. Paris, UNESCO/ED/173, February 29, 1960, p. 17.

[2]Government of Pakistan, Report of the Commission on National Education (Karachi: Ministry of Education,1959), p. 265.

[3]Ibid., p. 271.

The authors of the <u>Curriculum Committee for Secondary Education</u>[1]
not only agreed with the report of the Commission on National Education,
but also strongly recommended that,

> government must undertake an extensive program of teacher training
> and refresher courses if education is to make headway. The teacher
> is the soul of the educational system. Let it be a live soul.

The Pakistan Government paid notice to the calling of the intellectuals
within the country and abroad and stated that,

> training of human beings in all fields of endeavor is essential if
> a breakthrough is to be effected from the state of chronic back-
> wardness and the country is to move rapidly forward towards the
> attainment of the desired social and economic goals.[2]

In-service training of teachers has been given more importance in the state-
ment,

> Teachers by the nature of their profession, deal with a body of
> knowledge and skills that is constantly expanding and changing.
> It is imperative that their understanding of their subjects and
> of the best techniques for teaching them be constantly refreshed.
> The plan makes provision for the in-service training of educational
> administrators, inspectors, headmasters, and specialized teachers.[3]

---

[1]Government of Pakistan, <u>Report of the Curriculum Committee for
Secondary Education</u> (Rawalpindi: Ministry of Education, 1960), p. 58.

[2]Government of Pakistan, <u>The Second Five-Year Plan (1960-65)</u>
(Rawalpindi: Planning Commission, June, 1960), p. 337.

[3]<u>Ibid</u>., p. 345.

CHAPTER III

CRITERIA FOR IN-SERVICE EDUCATION
IN EAST PAKISTAN

Successful planning, organization, assessment, and evaluation
of any effective in-service educational program should be based upon a
set of carefully designed criteria. The purpose of each criterion is
to "consistently direct or guide individual and group action in plan-
ning, organizing, and conducting in-service education activities."[1]

Webster[2] defines "criterion" as a standard, rule, or test by
which a judgment of something can be formed. However, "standard" also
applies to some measure, principle, model, etc., with which things of
the same class are compared in order to determine their quality, value,
quantity, etc. Criterion, on the other hand, applies to a test, or
rule, for measuring the degree of excellence. Webster also defines
"principles" as fundamental truths, comprehensive laws or doctrines
from which others are derived or on which others are founded. They
also may pertain to essential characteristics, to conditions or to
rules of action. From this definition it can be assumed that criteria
and standards are necessary controls to guide operations in any field
of human activity. They are guides by which one proceeds from one
situation to another. For the purpose of this study, the terms criterion
and standard will be used interchangeably.

---

[1]J. Cecil Parker, Guidelines for In-Service Education," Inservice
Education: The Fifty-Sixth Yearbook of the National Society for the Study
of Education (Chicago: University of Chicago Press, 1957), p. 103.

[2]Noah Webster, Webster's New World Dictionary of the American
Language (Cleveland and New York: The World Publishing Company, 1962),
pp. 349, 1421, 1159.

The plan for development and use of criteria for effective in-service education programs in East Pakistan was composed of two broad steps.

A. An extensive search, review, analysis and synthesis of available materials in both English and Pakistani languages in the educational institutions of the United States and Pakistan, for setting forth the criteria of in-service education which would provide the framework of in-service education.

B. An examination of relative emphasis given to each of the criteria by its author, and determination of the importance of that criterion in the organization of in-service education in East Pakistan.

Wilson[1] identified eight basic principles for all in-service education programs:

1. In-service training must be continuous.

2. In-service training must be adapted to varying levels of professional readiness.

3. In-service training must be multi-disciplined.

4. In-service training should make broad use of the literature in the field.'

5. In-service training must recognize personality needs of the staff.

6. In-service training should utilize community resources.

7. In-service training should be planned by the group.

8. In-service training must be integrated and modified in terms of the institutional needs.

[1]Francis M. Wilson, "What Makes an Effective In-Service Training Program?" Journal of the National Association of Deans of Women, XVI (1953), pp. 51-56.

Vossbrink[1] provides four major categories of underlying principles of in-service education:

Category 1: In-service teacher education should consider the nature, ultimate aims and values of society within which education operates. The complex relationship of education to society demands that in-service education should be less the mirror than the improver of the society.

Vossbrink's other categories offer more generalized concepts, and deal with abstractions rather than concrete specifics.

Category 2: The immediate community as a whole, its resources, its problems, and its social climate will be considered as the matrix of immediate educational problems and procedures.

Category 3: A worthwhile in-service education program assists in enriching the teaching-learning setting through an improved environment and improved methods.

Category 4: Teachers improve in competence and grow in service as a result of what they are able to do of, by, and for, themselves.

Parker[2] suggests twelve guidelines for planning, organizing and conducting in-service education activities and programs in schools and school systems. His guidelines offer broad generalizations and flexibility in the organization. In countries where democracy flourishes in

---

[1]Meta Vossbrink, "An Analysis of the In-Service Education Programs for Home Economics Teachers with Suggestions for Improving the Michigan Program" (unpublished Ph.D. dissertation, University of Chicago, 1953).

[2]J. Cecil Parker, op. cit., pp. 103-130.

its most genuine form Parker's guidelines seem to be the most effective criteria.

1. People work as individuals and as members of groups on problems that are significant to them.

2. The same people who work on problems formulate goals and plan how they will work.

3. Many opportunities are developed for people to relate themselves to each other.

4. Continuous attention is given to individual and group problem-solving processes.

5. An atmosphere is created that is conducive to building mutual respect, support, permissiveness and creativeness.

6. Multiple and rich resources are made available and are used.

7. The simplest possible means are developed to move through decisions to actions.

8. Constant encouragement is present to test and to try ideas and plans in real situations.

9. Appraisal is made an integral part of in-service activities.

10. Continuous attention is given to the inter-relationship of different groups.

11. The facts of individual differences among members of each group are accepted and utilized.

12. Activities are related to pertinent aspects of the current educational, cultural, political, and economic scene.

Gilchrist[1] also suggested some guiding principles for organizing in-service education programs which give individuals the maximum opportunity for growth. An effective in-service education program involves the participants in identifying the problems on which they are to work. They have the opportunity to share in the planning and take part in determining the degree of success of their efforts.

Gilchrist would also like to minimize the temptation of the participants to show off, make participation voluntary rather than required, develop leadership skills, insure right timing, adequate facilities, and resources to stimulate and strengthen a comprehensive program and provide for communication and interaction among all persons at all levels in the school system. Gilchrist's suggestions seem to be consistent with the guidelines offered by Parker.

The educators[2] of the thirteen states comprising the central region of the United States evolved a set of fifteen principles for in-service educational programs in that region. They now constitute the basic guidelines for action by each state in the region in carrying out their training program for Teachers of Vocational Agriculture. The principles are:

1. All persons involved in teacher-education should share the responsibility of in-service education.

---

[1]Robert S. Gilchrist, "Highway to Quality Teaching," National Education Association Journal, XLVII (May, 1959), pp. 18-19.

[2]George W. Sledge, George P. Deyoe, and Harold M. Byram, "Principles and Practices for Planning In-Service Educational Programs for Teachers of Vocational Agriculture in the Central Region" (Madison: University of Wisconsin, Department of Agricultural and Extension Education, 1959), 16 pp. Mimeographed.

2. The participants should identify and solve their own problems.

3. Institutional policies should encourage in-service education programs.

4. The in-service educational program should be continually evaluated and improved.

5. The in-service educational program should stimulate needed changes.

6. The program of in-service education should aid in the development of local, long-range programs.

7. The program should be concerned with the planning, organization and maintenance of physical facilities.

8. The program should promote understanding and appreciation of local programs.

9. The program should foster cooperativeness and good working relationships.

10. The program should enable a maximum number of opportunities for participation.

11. The in-service program should be planned to provide for the instruction and improvement of a maximum number of teachers.

12. Summer school sessions designed to meet the needs of teachers should be provided.

13. The program should assist teachers in discharging responsibilities toward the educational programs of the entire school.

14. The program should provide opportunity for teachers to improve themselves through graduate studies.

15. Teacher education departments of teacher training institutions should provide consultative services for teachers, school administrators, and others on an individual and group basis.

It seems the fifteen principles changed gradually from broad generalizations to specifications and subsequent recommendations. Some of the recommendations, although very worthwhile in the United States, seem not to have any practicability in East Pakistan, due to its peculiar cultural characteristics and educational situation.

Gross'[1] dissertation offers some of the best guidelines of in-service education relative to administration with its particular emphasis upon student personnel workers. Some of his guidelines merit consideration for this study. They are:

1. There are general principles applicable to the organization and functioning of all in-service education programs.

2. The development and success of an in-service education program is primarily dependent upon the leadership.

3. An in-service education program usually reflects the diverse interests, needs, and professional desires of individual staff members.

4. Each school's program must be planned, initiated and perpetuated in view of individual staff and institutional goals and needs. No one pattern of in-service education is universally applicable to all institutions.

5. Every in-service education program should begin with a set of agreed upon objectives which give direction to the over all program.

6. In-service education programs must be continually planned and maintained.

---

[1]Richard E. Gross, "A Study of In-Service Education Programs for Student Personnel Workers in Selected Colleges and Universities in the United States" (unpublished Ph.D. dissertation, Michigan State University, East Lansing, 1963), p. 140.

7. In-service education activities must be geared to the varying

    levels of professional readiness of program participants.

8. The in-service education program should be continuously evaluated,

    and measuring instruments by which this can be accomplished

    should be designed, developed and evaluated.

The Herron[1] study recommended that an in-service education program

for college and university trustees should be founded upon the follow-

ing principles.

1. Each institution's needs are unique; therefore, the program

    must be designed with these individual needs in view.

2. Objectives and goals of the in-service education program should

    be determined and they should complement the objectives of the

    college.

3. The activities of the in-service program must be maintained

    with a high degree of continuity and regularity.

4. Strong motivation and momentum should be effected and con-

    tinued by the leadership of the in-service education program

    if maximum results are to be achieved.

5. Acknowledged imaginary barriers of communication must be

    eliminated so that an open channel of communication can exist.

6. Frequent regularity in communication should be maintained

    among those providing in-service education leadership.

7. The in-service education program must be evaluated individually

    by each participant.

---

[1]Orley R. Herron, Jr., "A Study of In-Service Education Programs
for Boards of Trustees of Selected Colleges and Universities in the United
States" (unpublished Ph.D. dissertation, Michigan State University, 1965),
pp. 146-147.

8. Projected and immediate needs must underlie the design of the in-service education program.

The present researcher's plan for formulation and substantiation of criteria was aided to an encouraging extent by the two research studies of Santos and Tandoc, both of whom identified a few principles of in-service education for the Philippines. Tandoc's principles were more concerned with objectivity and abstractions, and attempted to make broad generalizations. It is obvious that in the light of her principles the process of appraisal, assessment and evaluation of an in-service education is difficult, if not impossible. Santos offered broad generalizations in some cases, but most of his criteria enabled the effective measurement of an in-service education program.

Santos[1] offered the following principles to give direction to whatever action would be taken to intensify and improve the in-service training programs as a result of his study.

1. In-service education is a co-function of and is intrinsically connected with pre-service teacher training.

2. The responsibility for providing adequate and appropriate in-service training programs should be shared equally by all responsible for education.

3. The program should meet the needs of all members of the professional staff.

4. The amount and quality of the professional and educational in-service growth of the teachers are directly related to the amount of encouragement which they receive and the incentives and opportunities provided to them by school officials.

---

[1]Bruno M. Santos, "An Analysis of The In-Service Training Needs and Participation of In-Service Training Programs by Teachers of Agricultural Schools of the Philippines" (unpublished Ed.D. dissertation, East Lansing: Michigan State University, 1961), 213 pp.

5. In planning in-service training programs those who will be affected should be involved.

6. All teachers, new or old, need in-service training.

7. The amount of teacher participation in and the quality and effectiveness of in-service training programs tend to be related to the quality of the professional leadership available.

8. The program should help bring about good working relationships and conditions for the members of the staff.

9. The program should be geared to and result in the improvement of the curriculum.

10. The various in-service training programs should complement each other.

11. A good program is self-sustaining.

12. The program should be responsive to the needs of teachers and sufficiently flexible as to be easily kept in gear with new developments in subject matter and methods, and kept abreast of scientific and technological progress and innovations.

13. The program should encourage creativity among participants.

14. In-service training should be provided for the clerical and administrative personnel of the school.

15. The program should be continuously evaluated.

Tandoc[1] suggested the following ten principles for in-service education in the Philippines:

---

[1]Florangel Sevidal Tandoc, "Suggestions for Improving the In-Service Education Program of High School Home Economics Teachers in Luzon, Philippines" (unpublished Ph.D. dissertation, East Lansing: Michigan State University, 1962), 139 pp.

1. The educational philosophy should be based upon the existing local environment and should be the most important factor in determining the nature of the in-service program.

2. The program should develop and change as social conditions are altered and participating teachers grow.

3. The program should be a regular program.

4. The program must be both a long range and a continuous program.

5. The program should utilize relevant resources in promoting and carrying out the experiences.

6. The program should emphasize sound educational theory which is basic for effective learning.

7. The program should be planned to utilize orderly procedures of thinking, studying, evaluating, and improving the products and processes of instruction.

8. The program should utilize intelligent and creative thought and action in the organization.

9. A well balanced program will include sufficient learning activities of varied types which contribute to the enrichment of many different purposes.

10. The program should include provisions for its own evaluations.

The studies discussed suggest that a good in-service education program will maintain continuity and regularity, will permit participants to work on the problems that interest them, and will meet the varying levels of institutional needs in a multi-disciplinary area. They further emphasize the importance of continuous evaluation, dependence upon effective institutional leadership, and planned participation in a complementary

and supplementary in-service education program on a voluntary basis.
The participants need to be strongly motivated, should have the opportun-
ity to maintain good relationships and communication at all levels, and
should create mutual respect, support and permissiveness. Multiple and
rich resources should be available for use and the activities that are
related to the present and future should be presented. Most of the prin-
ciples seem to be convertible to phenomena which are observable but dif-
ficult to measure quantitatively or even qualitatively.

At this stage, it is the purpose of the researcher to suggest ten
criteria for planning, organizing, conducting and evaluating in-service
education activities and programs in educational institutions of East
Pakistan. In the formulation and substantiation of the criteria due regard
was paid to: (a) the present concept of in-service education as discussed
in Chapter II-A, (b) the implications and needs of in-service education
as presented in Chapter II-B, (c) the recent research in the field of in-
service education as presented in Chapter II-C, (d) the opinions and values
of the Asian educators on in-service education as presented in Chapter II-D,
(e) the principles, guidelines, standards or criteria of in-service educa-
tion offered by various educators in the present chapter, (f) the exper-
ience of educationists with in-service education activities and programs
within Pakistan and the United States as discussed by them with the re-
searcher, and finally (g) the current growth need of the in-service educa-
tion participants as perceived by the researcher.

However, the ten criteria designed have limitations since they
are not inclusive of all the aspects of in-service education. They have
been suggested as a standard, based on the researcher's values and exper-
ience, and reflect entirely his point of view. Also, no "sequential-step"

significance is to be attached to the order of the criteria here presented.
This is due to two reasons: first, since no criterion here presented is
exclusive and independent of itself, it is impossible as well as unsound
to derive any decisions from a single criterion; second, it would also
be unlikely, if not impossible, for individuals or groups to proceed
with the plans indicated by criteria in a similar series of sequential
steps. No one sequence of steps would ensure a desirable program. The
best process would be an understanding of the ten criteria and their
implications in practice. This would enable any institution to start
at a point which seems most promising for its own situation and needs.

1. Participation in in-service education is a regular part of
   the school program.

2. The program includes both long range and immediate continuous
   activities.

3. People work on problems that are significant to them and
   plan how they will proceed.

4. Multiple and rich resources are made available and are used.

5. An atmosphere conducive to the testing, trial, and utilization
   of creative ideas and plans in practical situations is main-
   tained.

6. Activities are related to the pertinent aspects of the cur-
   rent educational, cultural, political and economic scene.

7. To move from decisions to actions, the simplest possible
   means are developed.

8. An atmosphere conducive to building mutual respect, support,
   permissiveness, and creativeness is established.

9. To achieve complementary in-service education activities, continuous attention is given to the interrelationship of different groups.

10. Appraisal is made an integral part of in-service activities.

These ten suggested criteria were used for the construction and development of the instruments for collection of relevant data in East Pakistan.

CHAPTER IV

METHOD OF STUDY

Sources of Data

The basic data used in this study were collected from secondary

school teachers, secondary school administrators, and consultants

directly or indirectly connected with the in-service education of second-

ary school teachers in East Pakistan. The process of collecting data

was accomplished primarily by three different instruments: Instrument

A--response to an open-ended questionnaire; Instrument B--response to

a highly structured questionnaire; and Instrument C--a survey question-

naire. In addition, personal depth-interviews, some of which were tape-

recorded, were used to go more deeply into certain areas of crucial need

where detailed information or clarification was a necessity. Also

data were gathered by attending a faculty meeting at the East Pakistan

Education Extension Centre, visiting the schools, and participating in

workshops. Educational documents, records, literature, course outlines,

syllabi of in-service education in various subjects, and individual

reports of participants attending past and present courses were systematic-

ally analyzed. Further information in depth was gathered personally from

the director, East Pakistan Education Extension Centre; chairman, Board

of Intermediate and Secondary Education, Dacca; deputy secretary, Depart-

ment of Education, Government of East Pakistan; principal, Teachers

Training College, Dacca; and planning director, Directorate of Public

Instruction, Dacca.

52

Universe and Population of the Study

The sample of the study consists of 108 schools scattered at random throughout East Pakistan. The population consists of selected teachers and headmasters from these schools. In addition, staff and line administrators and consultants, who were directly or indirectly connected with the in-service education program of secondary school teachers in East Pakistan, were drawn from the field of education.

The distribution of the population was as follows:

1. 112 secondary school teachers from 94 schools under training at the East Pakistan Education Extension Centre.

2. 110 secondary school teachers from 14 schools visited by the researcher.

3. 14 staff administrators.

4. 31 line administrators.

5. 13 consultants.

Sampling of the Universe and Population

Sampling of the subjects chosen for the data collection consisted of two distinct phases.

Phase A.--Inclusion of all secondary school teachers and line administrators who were attending in-service education programs at the East Pakistan Education Extension Centre.

Phase B.--Selection of schools which would be representative of typical schools in East Pakistan and inclusion of all subject teachers in the sample.

Description of Phase A

Regular in-service education programs in the form of workshops are held at the Education Extension Centre for various subjects. Teachers come from various schools of East Pakistan to attend this program. Invitations are sent at random to the secondary schools within selected regions about four weeks in advance of the workshop. The degree of response to these invitations was about 10 to 15 percent. The teachers who represent the schools at these workshops are nominated at random by the headmasters of their schools. (However, the expressed desire of a teacher to attend the workshop often becomes a criterion for selection.) The East Pakistan Education Extension Centre has no way of predicting in advance how many participants will be available for such a course and from which schools. Therefore, the teachers attending the workshops at the East Pakistan Education Extension Centre provide a sample which would be similar to a sample drawn by random sampling methods. During the presence of the researcher at Dacca, from December 29, 1964 to March 19, 1965, 14 such courses were arranged. The researcher decided to include all the participants in all the courses in the sample (Table 1) but two--one course having exceptionally well qualified and another having exceptionally poorly qualified teachers. Although this sample may have introduced a little bias since the teachers have already expressed their "need" by attending such a workshop, still their inclusions were justified on the grounds that they represent the schools from all parts of the country. However, all the responses gathered from this sample were not included in the study. A number of completed instruments were discarded when the researcher had the slightest doubt as to the validity of the response. The researcher had 291 responses from the teachers and only 228 responses were included in the sample.

Table 1. Program of In-Service Courses During January-March, 1965, East
Pakistan Education Extension Centre, Dhanmondi, Dacca 2

Sl. No.	Field	Duration	Location	Expected Enroll- ment	Actual Enroll- ment
1	2	3	4	5	6
1.	Arts & Crafts (for Pilot Schools)	Dec. 21- Jan. 9	Dacca	25	21
2.	English(in collabora- tion with the British Council)	Jan. 5-16	Dacca	25	23
3.	General Science	Jan.11-23	Dacca	25	11
4.	Bengali	Jan.11-23	Dacca	25	13
5.	Agriculture	Jan.11-23	Dacca	25	21
6.	General Science	Feb. 8-20	Dacca	25	13
7.	Arts & Crafts	Feb. 8-27	Dacca	25	31
8.	English for Teacher Trainers	Feb. 8- April 7	Dacca	30	**
9.	Study Conf. of High School Heads	Feb. 22- March 6	Dacca	30	12
10.	Course for Magazine Advisors of Pilot Schools	Feb. 22- March 6	Dacca	21	**
11.	Agriculture	Mar. 8-20	Dacca	25	10
12.	Bengali	Mar. 8-20	Dacca	25	7
13.	Course for Music Teachers	Mar. 8-27	Dacca	25	3
14.	Study Conf. of Pilot School Heads	Mar.15-20	Dacca	21	*

*Not available.

**Not included in the sample.

Three types of checking were employed to insure the reliability and validity of the responses made by the respondents.

1. The researcher checked whether the response made at item A-11 corresponded with the response made at P-1 column A. If not, the entire instrument was discarded.

2. A check was made to determine that the responses made in category M, N, O, P were in accordance with the directions, and did not contradict each other. For example, if a respondent indicated that he did not have a visit from the headmaster of his school in item M-1 column A, but responded to column B, obviously he did not understand the directions. The entire instrument was discarded.

3. A value of 1 or 2 as a response to the item T-1 indicates an inadequate knowledge of English on the part of the respondent and thus his responses cannot be trusted.

A total of 63 instruments were thus discarded. About 50 percent of the secondary school teachers in the final sample were drawn through the process of Phase A.

Description of Phase B

Time and finance limited the extent of the researcher's visitation of schools outside Dacca, the capitol of East Pakistan and the center of educational, economical, social, and political activity. The researcher had the opportunity to visit only five places for collection of data.

The places were selected as follows:

East Pakistan possesses twenty-one Pilot Schools which can be grouped in three distinct categories: (1) ten government boys high schools, (2) five

government girls high schools, and (3) six non-government rural boys high schools.

Fifteen government Pilot High Schools within categories one and two are situated in ten towns of East Pakistan (i.e., five towns have both boys and girls Pilot High Schools). The names of towns without a girl's school were excluded and the rest of the five towns were listed alphabetically. It was decided to select a first and last town in alphabetical order for visitations. However, the name of Chittagong (first town in alphabetical order) was excluded because economically and socially Chittagong and Dacca are similar in nature. So Comilla and Sylhet were selected for visitations. Dacca, as the center of educational activities, was included.

The two Pilot Schools (boys and girls) each in Comilla, Dacca, and Sylhet became the centers of "cluster" schools in those areas for visitations. Two other non-government, private schools (one for boys and one for girls) in each area were selected at random for inclusion in the sample. And finally a fifth school was selected outside the fifteen mile radius of the center Pilot Schools for inclusion in the sample. The fifth school represents the rural school.

The six rural Pilot Schools in category three were arranged alphabetically, and the first and last schools in alphabetical order (i.e., Narangiri and Sarda) were selected for inclusion in the sample.

All the subject teachers and headmasters in the schools visited were included in the sample, through a pre-selected procedure.*

─────────────────

*See Appendix E.

Data-Gathering Instruments

Most of the data were collected with the help of three instruments developed by the researcher. Instrument A consisted of six open-ended questions and was administered to the secondary school teachers only. Instrument B was a highly structured questionnaire with multiple-choice responses, and was administered to all the subjects in the sample. Instrument C was a survey questionnaire with checklists and was administered by mail to the administrators only.

Instrument B was created for administration to the teachers, administrators, and consultants for collection of the major data. The instrument consisted of twenty-one major groups. They are related to educational and personal information, job information, in-service education needs, participation in in-service education programs, role of teachers, and attitudes towards the teaching profession. All three sets of instruments were pretested on two Pakistani students, three Filipino students, and five American secondary school teachers at Michigan State University.* The Philippines are similar to East Pakistan. Both are rice-growing Southeast Asia countries where English is predominantly spoken and is a medium of instruction in secondary schools. Cultural, social, and economic conditions are more or less similar, or tend to be similar, in the two countries. The American classroom teachers helped particularly in the classification and elaboration of many items in the instrument in the light of their classroom experience. Appropriate changes were made after each pretest was taken. Further changes were

---

*One of the Pakistani students had experience teaching secondary schools in West Pakistan, and the other taught at the college level in East Pakistan. All three Filipino students had teaching experience in the Philippines.

incorporated after the sixth draft of the instruments was scrutinized by the members of the Doctoral committee. At this stage, the instruments were presented to Dr. Kenneth J. Rehage at the University of Chicago, and Dr. John B. McClelland at Iowa State University, both of whom were closely connected with in-service education of teachers in East Pakistan. The researcher had personal consultations with Drs. Rehage and McClelland. The seventh draft of the instruments was then mimeographed.

Five copies of the mimeographed instruments were mailed to three experienced headmasters and two renowned educational administrators of East Pakistan, for review and suggestions. They were requested to act on three instruments in accordance with seven steps.

The headmasters were the researcher's former teachers. The administrators were well known to the researcher and were his patrons. The researcher selected them in anticipation of their close cooperation.

Step 1: Please indicate categories or items that do not exist as "need" for teachers and administrators, and could be omitted.

Step 2: Please indicate items which are not intelligible, understandable, or clear to the average school teacher in East Pakistan, due to the use of the phrasing, English, sentence structure, or for any other reason.

Step 3: Please indicate areas or items of "need" that have not been included in these instruments but are significant enough for inclusion.

Step 4: Please indicate the "statements" and "directions" that are vague or unclear.

Step 5: Please write your general attitudes and reactions in response to such instruments.

Step 6: Please indicate the total time consumed in responding to the instruments.

Step 7: Please write freely if you have further advice and suggestions.

Two headmasters and two educational administrators responded to the researcher's request and their suggestions were incorporated as far as feasible. The instruments were then finally mimeographed for administration.

The three forms of instrument B for teachers, consultants, and administrators are basically the same as far as items of information are considered, but they differ in their wording of the statements to be checked. In instrument B for teachers, an attempt was made to identify the teachers totally with the instrument. Statements like, "I need to increase my knowledge and understanding in the subjects I teach," were written. This made teachers more psychologically prepared to respond to the instruments as individuals and as honest persons, and not as representatives of the universe of secondary school teachers. This procedure, the researcher believes, significantly assured the teachers that the responses they were making were individual opinions about themselves. They were the persons in the best position to pass judgment over the items on which opinions were sought. Their opinions would never be challenged or argued by the researcher or any other group. A sense of security and confidence towards the researcher was nurtured and fostered among teachers. This confidence, the researcher believes, contributed greatly to the reliability of the responses.

Instrument B for administrators and consultants contained the same items of information but was written with an objective approach (e.g., "teachers need to increase their knowledge and understanding of the subjects they teach"). Also the administrators and consultants were asked not to respond to certain items which were not applicable to them.

Methods of Administration of Instruments

The theoretical method of administration of instruments A and B was very simple. The teachers would be requested to meet the researcher in groups of five to ten, in two different sessions. In the first session, the teachers would be given an orientation to the over-all purpose of the researcher and the responsibilities and roles expected of them. Next, they would be requested to respond to instrument A or open-ended questions. The entire session would take about forty-five to sixty minutes.

In the next session which could be in the afternoon or next day, the teachers would be exposed to instrument B (the highly structured questionnaire). This session would continue from ninety to 120 minutes. The over-all plan of administration of instruments A and B would consume a total of three hours for every five to ten groups of teachers.

However, in actual practice the entire process of administration of instruments varied with the groups of teachers, places where it was administered, educational backgrounds, situations (i.e., in school or in the home, or in East Pakistan Education Extension Centre) and the hour. Teachers seemed to respond best when they were in good humor and had relaxed over a cup of tea. Tense classroom situations, with the researcher acting as a classroom teacher, seemed to be the most discouraging situation.

The first experience of the researcher with the teachers at the East Pakistan Education Extension Centre was that the teaches were probably having difficulty in responding to the instruments due to the fact that they were in English. The English language is not the mother tongue in East Pakistan, but only the medium of instruction in secondary schools.

So the alternate method (administration of the instruments in Bengali, the mother tongue) was considered. The instruments were translated by a Doctoral candidate in Bengali literature at Dacca University, in association with the researcher.* The Bengali draft was pretested with five line administrators at the East Pakistan Education Extension Centre and three teachers. Six of them, all three teachers, and three administrators, opined that the Bengali version was more difficult to understand due to the complexity of the language itself. Further polishing of the translated language was not of much help, so administration of the instruments in Bengali became out of the question.

The researcher believes that two significant reasons were responsible for the difficulty of the teachers in responding to the instruments. First, the teachers were unaccustomed to making responses to such instruments. About 80 percent of the teachers indicated that this was their first participation in a large-scale research project, so they did not understand how to react in such a situation. Second, they are characterized by a peculiar sense of uncertainty plus a type of complex (the researcher is not sure whether he should call it inferiority) which assumes that any effort to learn about teachers in East Pakistan is futile, because no one is really interested in the upgrading and well being of the teachers.. All interest shown in the teachers is assumed to be superficial.

The researcher tried in every way possible to make them feel like free, independent, and honest teachers while responding to the instruments. The researcher spent about eight to ten hours with each group of teachers divided into five distinct sessions.

---

*Mr. Fakruzzaman Chowdhury is now an employee of the government of East Pakistan. His dissertation is awaiting Doctoral committee acceptance.

In the first session, which continued from fifteen to twenty minutes, the subjects were oriented to the problem and were exposed to instrument A (open-ended questions).

In the second session, which continued for sixty minutes, teachers made responses to the open-ended questions, and were introduced to instrument B (the highly structured questionnaire). The method of response to this questionnaire was explained at length and in detail.

In the third session which continued for sixty to ninety minutes, the entire instrument B was re-explained in light of the difficulties faced by the teachers while reading through it the previous night. Teachers were requested to go through instrument B again, and told that if they have more difficulties, they should bring those problems for discussion the next morning.

The fourth session, which continued for about 180 minutes, was primarily to ensure that all teachers in the group understood clearly how to respond to the instrument. Next the teachers were asked to respond to the instrument in the presence of the researcher who was to extend help whenever needed.

In the fifth session, the teachers were interviewed in private for ten to fifteen minutes, to assess in depth some of the responses.

The experiences of the researcher in the administration of the instruments among the subjects in the schools he visited were significantly different from those experienced at the East Pakistan Education Extension Centre. Due to the time limitation, the researcher planned to have two sessions of three hours each in the schools he had visited.

In the first session, the researcher explained in detail the purpose of his visit, the purpose of the study and the role and responsibilities expected from the subjects for the study. Next the researcher explained page by page, item by item, instrument B, and the procedure for its response. The subjects were requested to take the instrument home that night, make the appropriate responses, and bring it back for the next session. In the next session, the researcher worked with every teacher for ten to fifteen minutes. During this short interview, the completed instruments were checked and questions pertaining to certain responses where further investigation was needed, were made. Deep attention was paid to determine whether the teacher had responded to the instruments with full understanding or not. Often they understood; but again, some teachers brought incompletely filled out instruments, omitting those segments of items which they did not clearly understand. When re-explained, they answered them promptly.

It was extremely encouraging for the researcher to note that the teachers were more at ease and more interested, willing, cooperative, and energetic to work with the researcher, at their own town of work than at Dacca. They also provided additional time, in off hours, to meet the researcher and cooperated with him in every way possible. The researcher was able to build more confidence in them, in a much shorter time.

The researcher believes two reasons were responsible for this particular behavior. First, since the researcher came all the way from Dacca to meet them, to talk with them and to carry away their important views with him, they felt somewhat more important (a status personality sought after) and thus were more willing to help. Second, since the

teachers realized that they were not in any way forced to respond to the instruments, they took a more cooperative attitude towards it. The researcher believes that these two elements were not present when he administered the questionnaire at the East Pakistan Education Extension Centre.

Teachers under training persistently held an idea that the act of responding to the instruments was part of an obligation of their presence at the East Pakistan Education Extension Centre, although the researcher constantly tried to refute this notion.

He had to work extra hours, outside the regular training hours, with the teachers. Although the researcher repeatedly requested the teachers to join these sessions voluntarily, and on their own, some of them would come without having any real interest in the project, but only in order to oblige the researcher who happens to be a member of the faculty. This concern of the teachers, which may have biased the data to some extent, could have been avoided if research time had been provided to the researcher within the scheduled training time.

And finally, the teachers being "captive" for two weeks may have grown dependent on the availability of the researcher's presence on campus whenever educational help was required, which may have thwarted their interest and eagerness to learn within the shortest period available. However, these experiences may denote the extreme and greater diversity that the teachers in East Pakistan possess and the thrills and difficulties that one experiences in assessing their in-service education needs.

The procedure followed for the administration of instrument B to the categories of administrators and consultants was the same. However, the time and efforts consumed for these groups were much less, probably due to their mature experience and higher educational background.

In all cases, the respondents were assured and guaranteed that their names would not appear in any of the instruments nor their schools or institutions identified individually in any segment of the study. Their instruments would be identified only by a code number known to the researcher. Also they were assured repeatedly that their responses would not be shown to any individual; they would be tabulated at Dacca by persons who are not concerned with in-service education activities in East Pakistan* and would be processed by computers in the United States. The respondents were requested to respond only when they had built up an extreme sense of confidence in the researcher. Respondents who were reluctant to respond to the instruments, or believed that the responses were to be used for some purposes other than the one claimed by the researcher were omitted from the population. Although the researcher was a government education officer on leave, careful efforts were made to prevent any thinking that there was an obligation of the respondents to respond, since the researcher happens to hold some power in the school system. Efforts were made to create an atmosphere in which the only obligation the respondents felt to respond to the instruments was the obligation of the individual to himself as an honoured member of the profession.

---

*Tabulation of the data were completed by the researcher's younger brothers, S.M.A. Rasul, a student of sophomore class, S.M.A. Hannan, a student of grade 10 in high school and Abdul Matin, an employee of the government of East Pakistan.

Difficulties Encountered

The researcher was an officer of the government of East Pakistan on leave and under training in the United States when he made his field trip for collection of data in East Pakistan. This peculiar situation of the researcher led him to assume five different roles which were extremely diversified and complex, and the combination of which was unique.

Role 1: A government officer and a member of the faculty of the East Pakistan Education Extension Centre.

Role 2: A student and a trainee at a United States university.

Role 3: An officer on leave and under training in the United States working on a research project which attempted to study in depth the program of a government institution for which he had worked previously. Yet the researcher did not have access to all the facts since he did not enjoy all the privileges he is supposed to enjoy when on active duty.

Role 4: An individual, friend or colleague, or client of a patron.

Role 5: A professional educator, irrespective of status and nationality.

The researcher was called upon at various times by various people to assume any or all of these roles, which at times proved to be a most difficult adjustment. The researcher preferred to assume the role of student (Role 2) or of a friend, colleague (Role 4). On many occasions while in East Pakistan the researcher was called upon to perform his functions as a member of the faculty, as if he were on duty, and the researcher gladly obliged. But he was not invited to attend faculty

meetings (the East Pakistan Education Extension Centre had three faculty

meetings between January 15 and January 30, 1965) on the grounds that

he was no longer a full-fledged member. However, he attended one of the

faculty meetings because of a desire to collect needed data.

On many occasions it was hard to make people understand the signifi-

cance of a study made in a situation where action was taking place. Many

wondered why the researcher was in East Pakistan, since he was supposed

to be at training in the United States and not vacationing in East Pakistan.

Others had a vague notion that the purpose of the researcher's field trip

to East Pakistan was anything but for research purposes.

The administrator of the girls' Pilot School at Dacca refused to

provide time to the researcher on irrelevant grounds, thus attaching

more importance to the latter's role as a student (Role 2) than to the

other roles. While the researcher could have exerted his privileges as

a government officer (Role 1) with active assistance of others in the

officer he did not prefer it. Forcing an unwilling population to be part

of the universe, would in itself undermine and jeopardize the data received.

Then again, a principal of a teachers training college gave more

importance to the researcher's role as student and trainee, and extended

all his cooperation for the research project. This cooperation might

not have been forthcoming if the researcher had other roles in action.

While working at the East Pakistan Education Extension Centre,

the researcher had to adapt constantly to shifting roles, each being

emphasized with the appropriate group for maximum results. In a com-

municating situation, often the perception of the two parties concerned

was not identical. For example, many respondents accepted the researcher

under Role 1 while he was constantly trying to act under Role 2. Among

various age groups, it seemed that the researcher had more access to and cooperation from the people belonging to the aged and younger group, while the middle-aged group seemed to be less cooperative and more reluctant to offer assistance. This was especially true at the East Pakistan Education Extension Centre Campus.

Although the faculty members of the East Pakistan Education Extension Centre made efforts to provide all cooperation, including time, to the researcher within the scheduled time of training program to meet the teachers for collection of data, this was not often possible due to official bureaucratic perception that this research was not a part of the in-service education program originally planned for teachers, and so any time needed for that purpose must come from outside the scheduled activity. However, the researcher always maintained, in vain, that responding to the instruments itself constituted an in-service education activity.

The need for punctuality was not observed; respondents were more often late than punctual.

Finally, the teachers themselves were skeptical regarding the researcher's purpose, because in many areas it was beyond their comprehension that fundamental research could be made and needed to be made based on teachers' perceptions, attitudes, thinking and needs. Want of confidence in themselves has probably caused such human behavior.

Method of Analysis

The tangible data collected were analyzed by CD 3600 computer at Michigan State University. The data were mostly analyzed through "Analysis of Contingency Tables (Act II)" and "Single Column Frequency Distributions"

methods. For each variable in the instrument B, the following calculations were made with the help of Act II.

    a. Observed frequencies

    b. Row means and standard deviations

    c. Percentage of cells in row totals (N $_{i.}$.)

    d. Percentage of cells on column total (N .,.j)

    e. Percentage of cells on table total (N .,.)

    f. Theoretical frequencies

    g. Contribution of cells to chi square

    h. Column means and standard deviations

    i. Chi square with degrees of freedom

For each variable in the instrument B an analysis of contingency tables for above calculations was run which resulted in 448 tables. The required information from these tables was tabulated by hand. Calculations of "ranking by teachers and administrators," "the difference between rankings" and "difference between means" were calculated manually. A sample of the tables (Act II) is included in the appendix.

Limitations of the Study

There were certain limiting factors which were inherent in this study.

    1. It was recognized that the in-service education needs of teachers were many and varied, hence their uses would be many and varied. The structured instrument B included almost all the possible needs (total need item: 226) which have been reported in the available research studies. However, it is possible that there are many other needs that were not included.

2. As to the sample of teachers who participated in the study, it was assumed that the sample was representative of the secondary school teachers of East Pakistan, although the sample was drawn by means of a preplanned procedure. It is assumed the thoughts and ideas of those included in the sample were not different from those of the rest of the secondary school teachers in East Pakistan.

3. The instrument A, which was lost during the process of transportation to the United States, could have substantiated some of the needs that the structured instrument findings suggests are of crucial importance.

4. This study is limited by the degree to which the respondents were able to present their in-service education needs.

5. The limitations inherent in a structured instrument in securing data are recognized in the present study. Owing to the fact that variation would occur in the interpretation of words by different respondents, this study is limited to the accuracy of the interpretation by each respondent.

6. The present study depends upon the perception of needs by the respondents during January-March, 1965. Since the opinions of each person are subject to change with changing conditions, the opinions held or reported in 1965 may not remain consistent with future opinions.

7. The rating scores are relative measures only. In analysis of data "great need" was given four points, "more need" three points, "average need" two points, "little need" one point and "no need" zero points. While each of the 280 respondents checked the importance of each need, his response depended

upon whatever he considered 'great' or 'more' or 'average' or 'little' need to be. Personal biases and/or errors of judgment may be reflected in the need scores. Therefore, the rating scores and mean scores used in this study indicate a relative measure only.

Such limitations as those listed above should be recognized in connection with any attempts which may be made to interpret the findings of this study or to apply them in various other situations.

CHAPTER V

PRESENTATION AND ANALYSIS OF DATA

In this chapter are presented the summarized data and pertinent findings relative to the purpose of the study. This chapter is organized in two parts. Part One presents the findings of tangible data obtained through instrument B. The categories are arranged in an order similar to that of the instrument. Part One covers the purposes nos. two to thirteen.

Part Two presents a case study of the East Pakistan Education Extension Centre and the findings from instrument C. Part Two covers the purposes nos. fourteen and fifteen.

Part One

Research Objectives and Relevant Data

In light of the general purposes and basic hypotheses of this study, the following specific research objectives and data are assumed to be pertinent and relevant:

1. To determine the in-service education needs of secondary school teachers and administrators in East Pakistan as perceived by them. The data relevant to this objective were acquired by calculating the mean responses to each need by the group.

2. To identify conflicts or differences between the degree of
their needs perceived by school administrators and teachers.
The data relevant to this objective were acquired by (a)
calculating the differences among the mean responses to
each need, (b) calculating the ranking of each need and the
differences in ranking among the groups, and (c) chi square.

3. To determine the uniformity or lack of uniformity (consensus
or lack of consensus) in the degree of need among members
within a position group such as teachers and administrators.
The data relevant to this objective were acquired by deter-
mining the standard deviation of the responses of the respect-
ive groups to each need.

4. To identify the range of responses on individual items within
a needs area to determine the variation of responses by mem-
bers of a position group. The data relevant to this objective
were acquired by subtracting the minimum mean value of an
individual item from the maximum mean value of another item
within the needs area for occupational groups such as teachers
and administrators.

5. To identify the mean value given to each needs area by teachers
and administrators in order to determine a hierarchy of need
areas. The data relevant to this objective are the mean value
of each need area acquired by calculating the average value
of all mean values given to each item in the same need area
by teachers and by administrators. The computed mean values
above 2.70 were considered as "great need," mean values 2.50
to 2.70 as "more need," mean values 2.30 to 2.50 as "average

need," and below 2.30 as "little need," in the need area.
The cutting points were determined on the basis of the dis-
tribution of the mean scores of all need areas by the two
position groups.

A. Biodata

The teacher's sample consisted of 222 teachers. Eighty teachers
(36.5 percent) came from rural schools and 140 teachers (63.5 percent)
from urban schools. One hundred and thirteen teachers (50.8 percent)
came from pilot schools and 109 teachers (49.2 percent) from non-pilot
schools. None of the teachers came from a teachers training institute
(Table 2).

The administrators' sample consisted of forty-five administrators.
Seventeen (37.8 percent) of the administrators came from rural schools.
Fourteen administrators (31.1 percent) came from urban schools. The
remaining fourteen administrators (31.1 percent) came from teachers train-
ing institutions, either pre-service or in-service.

Eighty percent of the teachers were males, 20 percent were females.
Thirty-six percent of the teachers were single and 63 percent were mar-
ried, two were widowed and none was divorced. Seventy-eight percent
of the teachers were Muslim by religion, 20 percent were Hindu and 2 per-
cent Christian. The administrators' sample consisted of 38 males (84.44
percent) and 7 females. Thirteen percent of the administrators were
single, 82 percent married and 5 percent widowed. Eighty-two percent
(37) of the administrators were Muslim by religion, 16 percent Hindu and
2 percent Christian.

Table 2. School Classification

	Teachers		Administrators	
School	No.	Percent	No.	Percent
Rural boys	44	19.82	9	20.00
Rural girls	3	1.35	5	11.11
Rural pilot boys	34	15.32	3	6.67
Urban boys	44	19.82	6	13.33
Urban girls	18	8.11	4	8.89
Urban pilot boys	54	24.32	4	8.89
Urban pilot girls	25	11.26	0	0.00
Teacher's Training Institutions including EEC	0	0.00	14	31.11

Forty-two percent of the teachers compared to 33 percent of the administrators had spent most of their time before entering the teaching profession living in a village. It seems that 65.5 percent of the teachers were from a rural area and had a rural orientation in education before entering the teaching profession, although only 36.5 percent of them were now teaching in a rural school. This may indicate the obvious preference of the teachers for teaching in an urban school (Table 3).

Similarly, 57.8 percent of the administrators were from a rural area and had a rural orientation to education and 37.8 percent of them were now working in rural situations.

Table 3. Type of Community

Community	Teachers N-222		Administrators N-45	
	No.	Percent	No.	Percent
Village	92	41.63	15	33.33
Town less 5,000 population	15	6.79	2	4.44
Town less 10,000 population	38	17.19	9	20.00
Town less 50,000 population	45	20.36	9	20.00
Town above 50,000 population	31	14.02	10	22.22

Table 4. Age of Individual Respondents

Age	Teachers N-222		Administrators N-45	
	No.	Percent	No.	Percent
Under 25 years	74	33.33	4	8.89
25 to 34 years	96	43.24	14	31.12
35 to 44 years	30	13.52	14	31.12
45 to 54 years	17	7.66	6	13.34
Over 55 years	5	2.25	7	15.56

The school administrators in the sample group were somewhat older than members of the teacher sample. This might be expected because of the experience that is usually required for administrative positions. The largest share of the administrators (62.24 percent) fell in the 25 to 44 year old group. The teachers' sample had its largest number of respondents in the under 34 year old group (76.47 percent). A large minority of the teachers (33.33 percent) were under 25 years of age (Table 4).

The teachers in this sample group had less experience than the administrators. However, in the groups with experience of 10 to 14.9 years and from 15 to 19.9 years the same percentage held for administrators and teachers. The percentages of teachers in categories with longer experience declined, presumably because of the shift in their position to administration (Table 5).

Nearly half of the school administrators (45.2 percent), held the Master's degree while the greatest number of teachers held the Baccalaureate degree. All the administrators had attained a Baccalaureate degree, while 19.5 percent of the teachers had no degree (Table 6).

Most of the administrators (62.22 percent) had some degree of professional education, compared with 29 percent of the teachers. The percentages of trained administrators and untrained teachers were almost the same (Table 7).

About half of the teachers (48.21 percent) were recent graduates in education and had finished their formal education between 1960 and 1964. While 26.77 percent of the administrators had completed their formal education prior to 1940, only 6.31 percent of the teachers had done so (Table 8).

The overall characteristics of the administrators' and teachers' samples may be summarized as follows:

1. The administrators were consistently older, more experienced, and better educated than the teachers of East Pakistan.

2. The majority of the teachers and administrators had rural orientation in their formal education, although their preference for teaching positions appeared to be in urban situations.

Table 5. Years of Teaching Experience

Years	Teachers N-222		Administrators N-45	
	No.	Percent	No.	Percent
0 to 4.9 years	97	43.70	11	24.45
5 to 9.9 years	53	23.87	5	11.11
10 to 14.9 years	37	16.67	8	17.78
15 to 19.9 years	19	8.56	4	8.89
20 to 24.9 years	11	4.95	6	13.33
Above 25 years	5	2.25	11	24.44

Table 6. General Education

Degree	Teachers N-222		Administrators N-45	
	No.	Percent	No.	Percent
Doctorate	0	0.00	0	0.00
Master of Science	1	0.5	0	0.00
Master of Arts	8	4.0	19	45.24
Incomplete Master's	3	1.5	3	7.14
Bachelor of Arts	112	56.0	15	35.71
Bachelor of Science	27	13.5	5	11.90
Bachelor (other)	10	5.0	0	0.00
Undergraduate	39	19.5	0	0.00
Undefined	22	----	3	----

Table 7. Professional Education

Degree	Teachers N-222		Administrators N-45	
	No.	Percent	No.	Percent
M.E.D.	6	2.78	8	17.78
B.T.	21	9.72	13	28.89
B.Ed.	36	16.67	7	15.56
Tr. from Junior Teacher Training College	2	0.93	--	-----
Other training	2	0.93	--	-----
No training	149	68.98	17	37.78

Table 8. End of Formalized Education

Years	Teachers N-222		Administrators N-45	
	No.	Percent	No.	Percent
Earlier than 1940	14	6.31	12	26.67
1940 to 1944	12	5.41	2	4.44
1945 to 1949	20	9.01	3	6.67
1950 to 1954	24	10.81	8	17.78
1955 to 1959	45	20.27	6	13.33
1960 to 1964	107	48.21	14	31.11

B. Subject Matter

Teachers and administrators were requested to identify six subject matter areas in which the secondary school teachers needed further education. In all, twenty-two subjects were mentioned, which indicated that a felt need existed in all items proposed (Table 9).

The chi squares were insignificant in all the subject matter denoting that there were no practical differences between the groups in the importance they attached to each subject matter area. However wide differences were observable in mean scores and ranks. But higher mean scores in this area represent more enthusiasm for learning a certain subject matter by one group compared with the other. They do not necessarily represent difference of practical significance.

The standard deviations indicate that the administrators were more uniform than the teachers in their responses indicating the degree of need.

The teachers gave top priority to the subjects of (a) English, (b) Bengali, (c) social studies, (d) mathematics, (e) science, (f) geography, and (g) agriculture. The administrators gave top priority for teachers in the subject areas of (a) English, (b) science, (c) mathematics, (d) Bengali, (e) social studies, (f) agriculture, (g) geography. It seems that the teachers and administrators were in agreement with the immediate importance of these seven subjects, and only differed on relative importance given to each.

Table 9. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Subject Matter Content

	Teachers				Administrators						
	No. Perceived Need	Mean of Need	Total Scores	Rank	No. Perceived Need	Mean of Need	Total Scores	Rank	Chi Square	S.D. Teach.	S.D. Admin.
Agriculture	23	3.35	77.05	7	6	3.17	19.02	6	2.86	0.83	0.93
Arithmetic	16	2.56	40.96	13	3	2.67	8.01	15	3.95	1.21	0.58
Arts & Crafts	20	2.55	51.00	12	3	3.33	9.99	11	2.72	1.00	0.58
Bengali	104	2.72	282.88	2	30	2.93	87.90	3	2.96	1.09	0.94
Biology	12	3.00	36.00	15	1	3.00	3.00	20	0.93	0.74	0.00
Chemistry	9	2.78	25.02	16	3	3.33	9.99	12	2.66	1.04	0.58
Civics	31	2.29	70.99	8	2	3.50	7.00	19	3.30	1.07	0.71
Commerce	2	2.50	5.00	22	1	3.00	3.00	21	3.00	2.12	0.00
Economics	20	2.70	54.00	10	3	3.33	9.99	10	4.70	1.13	0.58
English	122	2.99	364.78	1	37	3.14	116.18	1	2.68	0.96	0.82
Geography	29	2.72	78.88	6	7	2.71	18.97	7	0.99	1.10	1.11
History	28	2.39	66.92	9	4	2.25	9.00	14	2.90	1.03	0.50
Home Economics	18	2.94	52.92	11	6	3.00	18.00	8	0.97	1.06	0.89
Hygiene	7	2.43	17.01	19	2	3.50	7.50	18	1.76	1.13	0.71
Industrial Arts	3	3.33	9.99	21	3	3.33	9.99	13	0.00	0.58	0.58
Islamic Studies	14	2.64	36.96	14	4	2.00	8.00	17	3.24	1.28	0.82
Mathematics	66	2.48	163.68	4	26	3.15	81.90	4	8.29	1.07	0.97
Physical Education	8	2.75	22.00	18	3	4.00	12.00	9	4.95	1.04	0.00
Physics	10	2.50	25.00	17	2	4.00	8.00	16	4.80	1.08	0.00
Science	49	2.90	142.10	5	28	3.68	103.06	2	10.32*	1.12	0.61
Social Studies	72	2.68	192.96	3	17	3.06	52.02	5	5.42	1.10	0.75
Urdu	5	2.80	14.00	20	--	----	-----	--	0.00	0.84	0.84

*Significant at .05 level.

C. Curriculum

I. Both the teachers and administrators agreed that the teachers have "great need" (2.72)* to develop an increased understanding and appreciation of the various changes proposed and adopted by the Commission on National Education (Table 10).

II. But the administrators seemed to be a little more enthusiastic about it and gave mean scores on the average 0.5 higher than the teachers.

III. Although the administrators and teachers differ on relative importance of four sub-items (C1, C2, C3 and C5) and their differences were statistically significant at .05 level, the differences in mean scores are relatively small, indicating minor practical significance.

IV. The standard deviations denote that the administrators had greater uniformity than the teachers in their responses indicating degree of need.

V. The range of responses among teachers was 0.15 and among administrators was 0.44 for the five sub-items.

VI. Both teachers and administrators ranked the five sub-items in the same order.

VII. The consultants were closer to the administrators in expressing their mean scores on the need items C1, C2, C3 and C5.

---

*See explanation, p. 75.

Table 10. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Curriculum

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
C1 Basic philosophy and concepts of new education system	2.68	3	3.24	3	0.56	0	9.57*	1.16	0.91
C2 Implementation and use of new syllabus	2.74	1	3.33	1	0.59	0	11.4*	1.16	0.77
C3 Use of new textbook	2.62	4	3.00	4	0.48	0	11.16*	1.18	1.13
C4 General scheme of studies	2.59	5	2.89	5	0.30	0	2.95	1.21	1.09
C5 Appraisal of problems that are being faced by teachers in implementation of new curriculum	2.70	2	3.24	2	0.54	0	9.79*	1.22	0.86
Average need	2.66		3.14		0.38				
Range of responses	0.15		0.44						
Average need area: 2.724									
Degrees of freedom: 4									

*Significant at .05 level.

D. Methods of Teaching

I. Both the administrators and teachers agreed that the teachers have "more need" (2.50) to learn further various methods of teaching, but they disagreed among themselves in rating and ranking the extent of need of various sub-items (Table 11).

II. Administrators perceived the needs of the teachers as consistently higher than the teachers themselves did.

III. The differences in perception between teachers and administrators were statistically significant at .05 level for four sub-items (D5, D7, D11 and D14) and at .01 level for seven sub-items (D2, D4, D8, D10, D12, D16 and D18), but the differences in means indicate that the four sub-items have differences below .60, and were thus of little practical significance.

IV. In the other seven sub-items (mark students impartially, manage unruly classes, do less lecturing and get more discussion, arouse more interest in the subject, be certain that the students understand the teacher, develop leadership in students, and teach students to think and to understand) the administrators perceived the needs of the teachers in these areas as much higher (the differences in means were above .60) than the teachers' own perceptions and these large differences seem to have some practical significance.

V. The standard deviations indicate that the administrators were more uniform than the teachers in responding to the degree of need.

VI. The range of responses among teachers was 0.86 and among administrators was 1.09 for nineteen sub-items.

Table 11. Perception of Need by Teachers and Administrators for Teachers in the Need Area: Methods of Teaching

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
D1 Audio visual materials	2.97	1	3.27	3	.30	-2	6.19	1.19	0.81
D2 Mark students impartially	2.14	17	2.87	11	.73	5	19.8*	1.52	1.16
D3 Teach slow learners	2.41	11	2.82	13	.41	-2	9.01	1.21	1.01
D4 Manage unruly classes	2.11	19	2.87	12	.76	5	18.26*	1.44	0.99
D5 Teach large classes	2.12	18	2.47	18	.35	0	10.31**	1.41	1.04
D6 Adapt teaching for bright and less bright students	2.52	7	2.96	7	.44	0	8.30	1.21	1.04
D7 Discover needs most urgently felt by students	2.57	6	2.82	14	.25	-8	6.23	1.24	1.23
D8 Do less lecturing and get more discussion	2.68	4	3.40	2	.72	2	13.77*	1.31	0.81
D9 Arouse more interest in subject	2.81	2	3.49	1	.68	1	12.21**	1.32	0.73
D10 Be certain that students understand him	2.42	9	3.04	6	.62	3	23.61*	1.51	1.15
D11 Develop leadership in students	2.15	16	2.93	9	.78	7	13.11**	1.38	1.23
D12 Teach students to think and understand	2.58	5	3.22	4	.64	1	14.70*	1.40	1.06
D13 Dev. unit method of instruc.	2.32	13	2.91	10	.59	3	9.16	1.25	1.00
D14 Use field trips in teaching	2.36	12	2.64	17	.28	-5	9.78**	1.21	0.86
D15 Use problems and projects more effectively	2.42	10	2.80	15	.38	-5	8.74	1.16	0.89
D16 Use small group discussions effectively	2.48	8	2.96	8	.48	0	16.53*	1.19	0.93
D17 Use role playing effectively	2.19	14	2.40	19	.21	-5	2.94	1.20	1.07
D18 Use resource persons effectively	2.17	15	2.73	16	.56	1	17.73*	1.33	0.96
D19 Provide better demonstration	2.74	3	3.20	5	.46	-2	7.49	1.26	0.87
Average need	2.42		2.93		0.51				
Range of responses	0.86		1.09						

Average need area: 2.50

Degrees of freedom: 4

*Significant at .01 level

**Significant at .05 level

VII. The administrators seemed to be more interested in letting the teachers learn the modern and advanced methods of teaching than the teachers themselves.

VIII. Teachers tended to rate higher than administrators did some of the methods of teaching which are rather expensive (audio-visual materials, field trips, etc.) to the school system. In spite of the obvious values of these methods it seems the administrators, keeping in view the precarious financial condition of the school system in general, tended to rate higher those methods of teaching which are inexpensive and which depend heavily on the individual merit and promise of the teacher (do less lecturing and get more discussion, manage unruly classes, arouse more interest in the subject, develop leadership in students).

IX. The consultants were closer to the administrators in expressing their mean scores on the need items D2, D4, D8, D9, D10, D11 and D12.

E. Personality as a Teacher

I. Both the administrators and teachers agreed that the teachers have "average need" (2.40) to improve their personality as a teacher (Table 12).

II. However, the administrators perceived the needs of the teachers consistently higher than the teachers did.

III. Both administrators and teachers ranked almost similarly the six sub-items in the group. But their differences in mean values were statistically significant at .05 level for two

Table 12. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Personality as a Teacher

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
E1 Work with their students	2.35	3	3.07	2	.72	-1	11.01**	1.42	1.21
E2 Work with their colleagues	2.14	4	2.76	4	.62	0	14.22*	1.36	1.05
E3 Work with guardians	2.09	5	2.67	5	.59	0	10.36**	1.33	1.09
E4 Behave in a friendly manner regardless of personal problems	1.91	6	2.62	6	.71	0	13.37*	1.40	1.11
E5 Lead a good life, enjoy work and play	2.50	2	2.84	3	.24	1	3.07	1.44	1.28
E6 Improve home, school and community living	2.87	1	3.20	1	.33	0	4.87	1.22	0.94
Average need	2.31		2.86		.56				
Range of responses	0.96		0.58						
Average need area:	2.40								
Degrees of freedom	4								

*Significant at .01 level
**Significant at .05 level

sub-items (B2 and B4). The difference in mean value which is above .60 for three sub-items (ability to work with their students, ability to work with their colleagues, and ability to behave in a friendly manner regardless of their personal problems)may indicate some practical significance.

IV. The standard deviations indicate that the administrators were more uniform than the teachers in responses to the degree of need.

V. The range of responses from teachers was 0.96 and from administrators was 0.58 for six sub-items.

VI. Both administrators and teachers gave top priority to increasing the "ability of the teachers to improve home, school, and community living." This may indicate a growing awareness on the part of the education personnel of the isolation of the school from the community which is typical of East Pakistan.

VII. Teachers gave more importance to learning further "how to lead a good life, to enjoy work and play" in preference to increasing their "ability to work with their students" and thus disagreed with the administrators in ranking this sub-item.

VIII. The consultants were closer to the administrators in expressing their mean scores on the need items E1, E2, and E4.

F. Human Growth and Development

I. Administrators and teachers agreed that the teachers have "great need" (2.79) to understand different aspects of human growth and development (Table 13).

Table 13. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Human Growth and Development

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
F1 What children's and student's interests are	2.75	3	3.33	1	.58	-2	12.29**	1.24	0.95
F2 How children learn to be good citizens	2.82	2	3.24	3	.42	1	7.93	1.24	0.86
F3 How children grow and develop physically	2.59	5	2.93	4	.34	-1	8.49	1.30	1.03
F4 How children grow and develop mentally	2.83	1	3.24	2	.41	1	11.61**	1.22	0.83
F5 How children accept religious values	2.68	4	2.71	5	.03	1	1.57	1.21	1.12
Average need	2.73		3.09		.36				
Range of responses	0.24		0.62						

Average need area: 2.79
Degrees of freedom: 4

**Significant at .05 level

II. Administrators perceived the needs of the teachers consistently higher than the teachers did.

III. Although the differences between administrators and teachers were statistically significant at .05 level for two sub-items (F1 and F4), the differences in mean value being below .60 indicates little practical significance.

IV. The standard deviations indicate that the administrators were more uniform than the teachers in responses to the degree of need.

V. Both the teachers and administrators gave almost equal value to each sub-item in the group. However, the teachers were more consistent in rating. The range of responses from teachers was 0.24 and from administrators was 0.62.

G. Principles of Learning

I. Administrators and teachers agreed almost equally that the teachers have "average need" (2.42) to understand better how students really learn and the conditions of effective learning (Table 14).

II. Although the administrators and teachers showed wide differences in ranking the eight sub-items within the group, the differences in means which were below .60 in seven sub-items and were not statistically significant indicate their non-significance in practical application.

Table 14. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Principles of Learning

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
G1 Relation between maturity and learning	2.33	6	2.71	4	.38	-2	6.01	1.18	0.99
G2 Teacher guidance of learning activities	2.59	1	2.87	3	.28	2	4.02	1.20	1.01
G3 Practice as a condition of learning	2.42	4	2.67	6	.25	2	2.11	1.19	1.07
G4 Transfer of training	2.15	8	2.44	8	.29	0	2.96	1.24	1.27
G5 Perceiving the effects of trials	2.22	7	2.56	7	.34	0	4.86	1.20	1.03
G6 Motivation and learning	2.34	5	2.91	2	.57	-3	12.33**	1.32	0.97
G7 Mental Health and learning	2.57	2	3.07	1	.60	-1	8.87	1.26	0.94
G8 Relation of remembering and forgetting with learning	2.43	3	2.67	5	.24	2	6.81	1.25	1.04
Average need	2.38		2.78		.35				
Range of responses	0.44		0.63						

Average need area: 2.42
Degrees of freedom: 4

**Significant at .05 level

III. The standard deviations denote that the administrators were more uniform than the teachers in assigning the degree of need.

IV. The range of responses among teachers was 0.44 and among administrators was 0.63 for eight sub-items.

H. Administration and Supervision

I. Both administrators and teachers agreed that the teachers have "average need" (2.26) to learn more about different aspects of administration and supervision in a school (Table 15).

II. However, wide inter- and intra-group disagreements were evident in mean values and ranks.

III. Administrators perceived the needs of the teachers to be consistently higher than the teachers did.

IV. The differences were statistically significant at the .05 level for three sub-items (H4, H5 and H9) and at .01 level for six sub-items (H1, H2, H7, H8, H10 and H11) which indicates that the participants disagreed on scoring for almost all items in this group. However, the differences in mean values denotes that five sub-items have differences below 0.60 and were thus of little practical significance.

V. In four other sub-items (teachers role as a teacher within the classroom, leadership, group dynamics and writing of reports) the administrators' perception of the need of the teachers in these areas was much higher (the differences in means are above 0.60) than the teachers' own perception and these constant differences have some practical significance.

Table 15. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Administration and Supervision

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
H1 Their role as a teacher within the classroom	2.36	2	3.11	1	.75	-1	13.50*	1.52	1.03
H2 Their role as a teacher outside the classroom	2.12	8	2.71	5	.59	-3	14.20*	1.37	1.01
H3 Ethical behavior as teacher	2.22	5	2.67	8	.45	3	7.10	1.41	1.22
H4 School laws and regulations	2.32	3	2.42	10	.10	7	11.18**	1.43	1.14
H5 Philosophy and objectives of school administration	2.44	1	2.91	3	.47	2	10.60**	1.25	0.92
H6 The process of policy and decision-making	2.30	4	2.62	9	.32	5	5.56	1.25	1.07
H7 Leadership (how they may become a leader)	2.20	6	3.00	2	.80	-4	14.87*	1.31	1.02
H8 Group dynamics (how they may work as a group member)	2.02	10	2.80	4	.78	-6	21.13*	1.25	0.97
H9 Writing of reports	2.11	9	2.71	6	.60	-3	10.36**	1.29	1.04
H10 Their relationship to the headmaster & other school officials	2.14	7	2.69	7	.55	0	16.03*	1.40	1.12
H11 Their relationship to the managing committee	1.70	11	2.04	11	.34	0	14.91*	1.37	1.24
Average need	2.17		2.70		.53				
Range of responses	0.74		1.07						

Average need area: 2.26
Degrees of freedom: 4

*Significant at .01 level
**Significant at .05 level

VI. Differences in the standard deviations denote that the administrators had greater uniformity than the teachers in responding to the degree of need.

VII. The range of responses from teachers was 0.74 and from administrators was 1.07 in the degree of need reported for eleven sub-items.

VIII. Teachers' three top choices for learning were (a) policy and objective of school administration, (b) teachers' role within the classroom, and (c) school laws and regulations. The three top choices of the administrators for learning by teachers were: (a) teacher's role within the classroom, (b) leadership, and (c) policy and objective of school administration.

IX. The teachers and administrators agreed equally in ranking sub-items "teachers' relationship to the headmaster and other school officials" and "teachers' relationship to the managing committee" as seventh and eleventh respectively. But they disagreed sharply in ranking sub-items "school laws and regulations," "the process of policy and decision making" and "group dynamics."

X. The teachers ranked the first two items above as third and fourth contrary to the administrators' tenth and ninth. It seemed that the administrators with their traditional conservatism made an effort to keep teachers out of spheres of activity which traditionally go with the administration.

XI. The consultants scored much higher than the teachers and administrators in expressing their mean scores on the need items H1, H7, H8 and H9.

I. Sources of Teaching Materials

I. Both administrators and teachers agreed that the teachers
have "great need" (2.79) to get some help regarding sources
of various teaching materials for use in the classroom (Table
16).

II. Both administrators and teachers were in surprising agreement
in scoring mean values and ranking to the three sub-items.
The differences in mean values did not exceed 0.19, although
the administrators scored consistently higher than the teachers.

III. The teachers' range of response (0.27) was almost equal to the
administrators (0.33) for the three sub-items.

IV. The standard deviations denote that the administrators had
greater uniformity than the teachers in responding to the degree
of need.

J. Co-Curricular Activities

I. Both administrators and teachers agreed that the teachers
have "average need" (2.40) to know how to organize, participate
in, and guide different co-curricular activities (Table 17).

II. The administrators perceived the need of the teachers as con-
sistently higher than the teachers did.

III. The difference between administrators and teachers was significant
at .05 level in one sub-item (J9) only; and the differences be-
tween means was below .60 which denotes its non-significance in
practical application.

Table 16. Perceptions of Need by Teachers and by Administrators for Teachers in the Need Area: Sources of Teaching Materials

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
I1 Printed materials	2.70	2	2.86	2	0.16	0	2.76	1.19	1.03
I2 Audio-visual materials	2.92	1	3.09	1	0.17	0	5.79	1.13	0.95
I3 Community resources and materials for field trips	2.65	3	2.84	3	0.19	0	8.05	1.22	1.07
Average need	2.76		2.93		0.17				
Range of responses	0.27		0.33						

Average need area: 2.79
Degrees of freedom: 4

Table 17. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Co-Curricular Activities

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
J2 School and student publications	2.39	2	2.80	2	0.41	0	6.35	1.33	1.20
J3 Meetings of guardians, teachers and administrators	2.55	1	3.09	1	0.54	0	8.21	1.29	1.10
J4 Teacher-Student club	2.28	7	2.60	4	0.32	-3	4.91	1.22	1.05
J5 Home visitation program by teachers	2.16	8	2.60	5	0.44	-3	6.66	1.22	1.01
J6 Programs for community work, e.g., night school, flood relief, etc.	2.36	5	2.58	7	0.22	2	8.11	1.27	0.97
J7 Programs or projects for improvement of school buildings and grounds	2.38	3	2.36	8	-0.02	5	6.95	1.24	1.17
J8 "Career Carnival," "Education Week," "Students Week," etc.	2.38	4	2.58	6	0.28	2	5.13	1.26	1.08
J9 Programs for manual work	2.29	6	2.80	3	0.51	-3	9.82**	1.19	0.89
Average need	2.34		2.67		0.33				
Range of responses	0.39		0.53						
Average need area:	2.40								
Degrees of freedom:	4								

**Significant at .05 level

IV. The standard deviations indicate that the administrators had greater uniformity than the teachers in responding to the degree of need.

V. The range of mean values of the rating by administrators was 0.53 and that of teachers was 0.39 for the eight sub-items.

VI. Teachers' three top choices for learning were: (a) organization of meetings of guardians, teachers, and administrators, (b) school and student publications, and (c) organization of programs and projects for improvement of school buildings and grounds.

VII. The administrators agreed with the first two choices of the teachers, but replaced the third with "programs for manual work."

J1. Student Organizations and Activities

I. Both administrators and teachers agreed that the teachers have "little need" (1.99) to know how to organize, participate in, and guide various student organizations and activities (Table 18).

II. Administrators and teachers ranked the five sub-items almost similarly.

III. Administrators scored consistently higher in perceiving the needs of the teachers.

IV. The range of the mean values of the administrators was 0.53 and of teachers was 0.44 for five sub-items.

Table 18. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Student Organizations and Activities

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Administ.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
J1A Boy Scouts	2.12	1	2.53	1	0.41	0	8.72	1.43	1.32
J1B Girl Scouts	2.02	3	2.38	2	0.36	-1	7.27	1.40	1.45
J1C Chand Tara Club	1.68	5	2.02	4	0.34	-1	4.95	1.35	1.36
J1D Junior Red Cross	2.11	2	2.27	3	0.16	1	1.61	1.31	1.25
J1E Sabuj Sangha Club	1.77	4	2.00	5	0.33	1	5.08	1.34	1.45
Average need	1.94		2.24		0.30				
Range of responses	0.44		0.53						

Average need area: 1.99
Degrees of freedom: 4

V. The standard deviations indicate that the administrators
and teachers were equally consistent in the degree of need.

K. Research and Experimentation

I. Both administrators and teachers agreed that the teachers have
"more need" (2.63) to be better informed about educational
research and experimentation (Table 19).

II. Both administrators and teachers perceived the needs of the
teachers almost equally in scoring the mean values.

III. The difference in rating was significant at the .05 level in
one sub-item, but the difference in mean value was below 0.60
denoting non-significance in practical application.

IV. The standard deviations indicate that the administrators had
greater uniformity than the teachers in responding to the degree
of need.

V. The range of mean values for the administrators for the three
sub-items was 0.18 and for the teachers was 0.29.

L. General Education

I. Both administrators and teachers agreed that that the teachers
have "average need" (2.44) to increase their general knowledge
and understanding of various aspects of general education (Table
20).

II. Administrators scored consistently higher than teachers in per-
ceiving the needs of the teachers.

Table 19. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Research and Experimentation

	Teachers		Administrators		Differences Between Means	Differences Between Rank	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
K1 How to conduct small studies and experiments in classroom, in the school and/or the community	2.40	3	2.89	1	.49	-2	6.52	1.22	1.05
K2 Opportunities to participate in large-scale research programs	2.70	1	2.71	3	.01	2	5.96	1.19	1.01
K3 How to make a survey of educational resources	2.69	2	2.80	2	.11	0	12.30**	1.14	0.89
Average need	2.60		2.80		.20				
Range of responses	0.30		0.18						
Average need area: 2.63									
Degrees of freedom: 4									

**Significant at .05 level

Table 20. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: General Education

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
L1 Current literature	2.64	5	2.96	6	.32	1	5.00	1.20	0.98
L2 Art	2.12	11	2.31	11	.19	0	1.12	1.22	1.20
L3 Music	1.83	12	2.02	12	.29	0	3.29	1.37	1.30
L4 Philosophy of education	2.44	7	3.00	4	.56	-3	9.45	1.21	1.04
L5 New ideas on education	2.78	1	3.29	1	.51	0	8.54	1.13	0.79
L6 Current national affairs	2.64	4	2.96	5	.32	1	3.89	1.18	1.00
L7 Current world affairs	2.76	2	2.93	7	.17	5	3.92	1.14	0.89
L8 New books in education	2.73	3	3.11	3	.38	0	7.31	1.12	0.98
L9 English language--total command	2.33	9	2.93	8	.60	-1	12.71**	1.21	1.10
L10 Bengali language	2.27	10	2.93	9	.66	-1	9.13	1.46	1.29
L11 Urdu language	1.67	13	1.87	13	.20	0	6.96	1.39	1.16
L12 Efficient method of using school library	2.55	6	3.18	2	.63	-4	11.95**	1.22	0.83
L13 Community development in social economic affairs	2.40	8	2.62	10	.22	2	3.53	1.19	1.03
English language--especially									
L9b their ability to speak	2.57	1	3.00	1	.33	0	8.03	1.23	1.09
L9c their ability to read	1.91	3	2.67	3	.76	0	11.00**	1.47	1.30
L9d their ability to write	2.15	2	2.67	2	.42	0	13.70**	1.42	1.35
Average need	2.36		2.84		.48				
Range of responses	1.11		1.42						

Average need area: 2.44
Degrees of freedom: 4

**Significant at .05 level

III. The differences between administrators and teachers were statistically significant at .05 level in two sub-items (English language, total command, and efficient method of using school library). The differences in mean values are above 0.60 and denote their significance in practical application.

IV. The standard deviations denote that both teachers and administrators were equally uniform in responding to the degree of need.

V. The range of the mean values of the administrators was 1.42 and that of teachers was 1.11 for thirteen sub-items.

VI. The top three choices of the teachers for learning were: (a) new ideas in education, (b) current world affairs, and (c) new books in education.

VII. The three top choices of the administrators were: (a) new ideas in education, (b) efficient methods of using school libraries, and (c) new books in education.

VIII. The teachers and administrators differed widely in ranking sub-items "current world affairs," "efficient methods of using school libraries," and "philosophy of education."

IX. But the teachers and administrators ranked similarly the three least important sub-items for learning. They are: (a) art, (b) music, and (c) Urdu language.

X. Learning of the English language was given equal importance by both teachers and administrators. However, they emphasized the importance of improving their "ability to speak" followed by "ability to write" and "ability to read."

XI. The consultants scored much higher than the teachers and administrators in expressing their mean scores on the need items L9 and L12.

M. Sources of Educational Help

Every human being finds need for help. All teachers from time to time find that they have need for educational help. Where they go for help naturally depends upon the resources that are available to them at that time and in that situation.

In order to determine the various sources of educational help that a typical East Pakistani teacher depends on, in time of need, each was requested to review a comprehensive list of sources of educational help that are usually available in an East Pakistani school. Teachers were requested to: (a) identify each type of help that they themselves have used at any time during their teaching career, and (b) to what degree they feel the need for each type irrespective of whether they have used the type of help or not.

Each administrator was requested to identify his perception of the degree of need by the teachers for each type of help available to them (teachers).

The results are summarized and shown in Tables 21 and 22.

I. All the teachers indicated that they have used at least one source of educational help during their entire teaching career. Most of the teachers, however, have used a wide range of sources of educational help.

Table 21. The Relative Need of Teachers for Sources of Educational Help

	Teacher			Need by Teachers				
	No. Not Used Help	No. Used Help	Rank	Help Not Used	Rank	Used Help	Rank	
M1 Teachers in their school	36	186	1	1.33	7	2.61	5
M2 Teachers in another school	133	89	10	1.02	13	2.03	16
M3 Their former students	139	83	11	0.71	17	1.98	18
M4 Their former primary or secondary teachers	108	114	5	0.80	16	2.01	17
M5 Their former professors	114	108	6	1.13	10	2.33	11
M6 Professors from local colleges	153	69	14	0.85	15	2.41	7
M7 Headmaster	45	177	2	1.76	3	2.85	1
M8 Assistant headmaster	72	150	3	1.13	9	2.39	8
M9 Secretary of the school	151	71	13	0.58	21	2.44	6
M10 Inspector of schools	125	97	9	1.32	8	2.37	10
M11 Specialists from Educ. Ext. Centre	91	131	4	2.18	1	2.72	2
M12 Other education officers (SDEO,DEO,*)	157	65	15	1.07	12	2.38	9
M13 Foreign specialists and advisors	115	107	7	1.99	2	2.63	3
M14 Peace Corps Volunteers	146	76	12	1.13	11	2.27	14
M15 Agricultural officers	157	65	16	1.38	6	2.26	13
M16 Faculty from Pak. Acad. Rural Dev.	160	62	18	1.50	5	2.31	12
M17 Basic democrats	179	43	20	0.59	20	1.60	21
M18 Other government officers	174	48	19	0.66	18	1.83	19
M19 Political leaders (not in office)	179	43	21	0.59	19	1.81	20
M20 Journalist, newspaperman or radio	122	100	8	1.64	4	2.63	4
M21 Local business, agri. or prof. person	157	65	17	0.92	14	2.11	15

*Sub-divisional Education officer, District Education officer

Table 22. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Sources of Educational Help

	Teachers		Administrators						
	Mean of Need	Rank of Need	Mean of Need	Rank of Need	Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
M1 Teachers in their school	2.61	5	2.95	2	0.34	-3	4.66	1.08	1.00
M2 Teachers in another school	2.03	16	2.00	16	-0.03	0	5.91	1.03	0.75
M3 Their former students	1.98	18	1.92	18	-0.06	0	5.05	1.01	0.93
M4 Their former primary or secondary teachers	2.01	17	1.92	17	-0.09	0	5.69	1.08	0.84
M5 Their former professors	2.33	11	2.03	15	-0.30	4	8.21	1.14	0.91
M6 Professors from local col.	2.41	7	2.35	9	-0.06	2	10.37**	1.13	0.71
M7 Headmaster	2.85	1	2.92	3	0.07	2	4.50	1.14	1.09
M8 Assistant headmaster	2.39	8	2.55	5	0.16	-3	12.31**	1.16	0.72
M9 Secretary of school	2.44	6	2.39	8	-0.05	2	3.29	1.32	1.09
M10 Inspector of schools	2.37	10	2.50	6	0.13	-4	3.50	1.18	0.99
M11 Spec. from Ed. Ext. Centre	2.72	2	3.06	1	0.34	-1	2.75	1.19	1.00
M12 Other ed. officers (SDEO, DEO, etc.)	2.38	9	2.27	12	-0.11	3	10.14**	1.25	0.78
M13 Foreign specialists and advisors	2.63	3	2.46	7	-0.17	4	3.50	1.15	0.95
M14 Peace Corps Volunteers	2.21	14	2.16	14	-0.05	10	6.14	1.19	0.90
M15 Agricultural officers	2.26	13	2.33	10	0.05	-3	4.53	1.15	0.82
M16 Faculty from Pakistan Acad. etc.	2.31	12	2.30	11	-0.01	-1	4.67	1.14	0.80
M17 Basic democrats	1.60	21	1.77	19	0.17	-2	5.35	1.20	0.87
M18 Other government officers	1.83	19	1.60	20	-0.23	1	6.63	1.23	1.29
M19 Political leaders(not in ofc)	1.81	20	0.61	21	-1.21	1	12.30**	1.26	0.78
M20 Journalist, newspapermen or radio	2.63	4	2.58	4	-0.05	0	1.47	1.05	0.95
M21 Local bus., agri., or profes. per.	2.11	15	2.23	13	0.12	-2	2.27	1.09	0.91
Average need	2.28		2.23		-0.05				
Range of responses	1.25		2.45						
Average need area: 2.26									
Degrees of freedom: 4									

**Significant at .05 level

Degrees of freedom: 4

**Significant at .05 level

II. The most commonly used educational help came from the "teachers in their school," followed by the "headmaster," "assistant headmaster," "specialists from East Pakistan Education Extension Centre," "the former teachers," "former professors," "foreign specialists and advisors," "journalists, newspapermen, and radio broadcasters," "Inspector of schools," and "teachers in other schools."

III. The least used sources of educational help were "political leaders," "Basic Democrats," "government officers," "faculty from Pakistan Academy for Rural Development," and "agricultural officers."

IV. The extent of use of different sources of educational help seems to be more influenced by the availability factor than by the degree of need or resourcefulness.

V. The appreciable agreement in ranking the degree of need by both groups of teachers, i.e., teachers who used the help and the teachers who did not use the help, may reflect the consistency of the teachers in their responses.

VI. Teachers who did not use help perceived the degree of need for such help consistently as much lower than the teachers who did use help.

VII. The range of mean values of the teachers who did not use help was 1.60 and of the teachers who did use help was 1.25 for twenty-one sub-items.

VIII. The correlation between ranking of the "degree of need" of different sources of educational help and the ranking based on the extent of use, reflects the fact that there is no relationship between reported use and perception of need. This was true both for those teachers who did not use the help and expressed the expectations of future need and for those who did use the help and expressed the need based on experience.

IX. The first nine choices of sources of educational help by the teachers who had used the help previously were: (a) head-master, (b) specialists from Education Extension Centre, (c) foreign specialists and advisors, (d) journalists, news-papermen or radio broadcasters, (e) teachers in their school, (f) professors from local colleges, (g) assistant headmasters, (h) education officers, and (i) Inspector of schools.

X. The teachers who did not use the help agreed with the choices of the teachers who did use the help in seven sources, but replaced the sources "secretary of the school," "professors from local colleges," and "education officers," with "faculty from Pakistan Academy for Rural Development," "agricultural officers" and "former professors."

XI. The sources of educational help perceived to be least needed both by teachers who used the help and those who did not use the help were: "basic democrats," "political leaders (not in office)" and "government officers." These sources were also the least used sources of educational help.

XII. Both the administrators and the teachers who experienced help agreed that the teachers have "average need" (2.26) of assistance from various sources of educational help.

XIII. However, the perception of the teachers of their own need for help was consistently higher than the perception of the administrators regarding teachers' needs.

XIV. This relationship is very significant in light of the previous responses of the teachers where teachers were constantly shy in comparison to the administrators in perceiving their own needs.

XV. The differences were significant at .05 level for four sub-items (M6, M8, M12 and M19), but the differences in mean values which were below .60 in three sub-items denote their non-significance in practical application.

XVI. Although the differences in mean value is above 0.60 in the sub-item, "political leaders (not in office)," the ranking by both teachers and administrators on this sub-item denotes that they agree rather closely on its importance. In reality both are opposed to the use of political leaders in schools, but administrators are stronger in their opposition. The consultants showed even stronger opposition than the administrators (0.85).

XVII. The mean value of the administrators ranged within 2.45 and of the teachers (who experienced help) within 1.25 in twenty-one sub-items.

XVIII. The standard deviations denote that administrators were more uniform than the teachers in responding to the degree of need.

XIX. The first nine choices of the administrators as a source of educational help for teachers were identical to the choices of the teachers who experienced help, but dissimilar in ranking (refer to MIX). However, the administrators replaced the choice of "educational officers (SDBO, DEO)" by "agricultural officers."

XX. The administrators agreed similarly with both groups of teachers in identifying the least needed sources of educational help (refer to MXI).

N. Classroom Visitors

Classroom visitation is a common phenomenon in an East Pakistani school. A number of persons visit the average classroom from time to time. The present study tried to get some idea of: (a) what kinds of people usually visit an average classroom, (b) the attitude of the classroom teacher to such visits, and (c) the perception of his future needs for such visits.

The teachers were requested to review a comprehensive list of types of classroom visitors and to indicate whether or not each type of visitor had visited his classroom during the year 1964. If the teacher had a visit, then he was asked to express his attitude towards that visitor.

And finally, he was requested to indicate his present feeling regarding the "degree of need" for this type of help in light of his experience.

The teachers who did not experience visits were also requested to express the "degree of need" for this type of help in light of their expectations.

The administrators were requested to identify their perceptions of the degree of need by the teachers for each type of visitation available to them (teachers).

The results are summarized and shown in Tables 23 and 24.

I. All the teachers indicated individually that they have experienced at least one type of classroom visitor during the year 1964. But most of the teachers reported a wide range of classroom visitors.

II. The most common classroom visitor was the: (a) headmaster, followed by (b) assistant headmaster, (c) Inspector of schools, (d) specialists from Education Extension Centre, (e) foreign advisors, (f) education officers, (g) Peace Corps Volunteer, (h) agricultural officials, and (i) instructor from teachers training college.

III. The extent of visitation by different types of classroom visitors seems to be more influenced by routine, regularity and formality, than by the degree of need of resourcefulness. The degree of need was measured but not the degree of resourcefulness. Perhaps some other research study should try to measure the relationship between frequency of visits and resourcefulness.

Table 23. The Relative Need and Attitude of Teachers for Classroom Visitors

	Teacher Not Visited	Teacher Visited	Attitude by Teacher Visited — Rank	Valuable	Uncertain	Not Valuable	Need by Teacher — Not Visited	Rank	Need by Teacher — Visited	Rank
N1 Headmaster	80 / %36.0	142 / 64.0	1	118 / 83.01	12.67	4.22	2.53	2	2.73	1
N2 Assistant headmaster	123 / %55.5	99 / 44.6	2	69 / 64.69	24 / 24.24	6 / 6.7	1.41	8	2.23	7
N3 Inspector of schools	121 / %54.5	101 / 45.5	3	67 / 66.33	29 / 28.71	5 / 4.95	1.88	5	2.53	4
N4 Education officers	180 / %81.0	42 / 19.0	6	22 / 52.38	17 / 40.47	3 / 7.14	1.42	7	2.24	6
N5 Inspector from T.T.C.	201 / %90.5	21 / 9.5	9	16 / 76.19	5 / 23.80	0 / 0	2.00	3	2.57	2
N6 Specialists from Education Extension Centre	165 / %74.2	57 / 25.6	4	28 / 49.12	27 / 47.36	2 / 3.5	2.62	1	2.54	3
N7 Foreign Advisor	167 / %75.2	55 / 24.8	5	29 / 52.72	23 / 41.81	3 / 5.45	1.96	4	2.22	8
N8 Peace Corps Volunteer	195 / %87.9	27 / 12.1	7	14 / 51.85	8 / 29.62	5 / 18.57	1.30	9	2.04	9
N9 Agricultural officers	198 / %89.1	24 / 10.9	8	16 / 66.66	4 / 16.66	4 / 16.66	1.56	6	2.33	5

Table 24. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Classroom Visitors

	Teachers		Administrators		Between Differences Means	Between Differences Ranks	Chi Square	S.D. Teachers	S.D. Admins.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
M1 Headmaster	2.73	1	3.55	1	0.82	0	9.97**	1.18	0.67
M2 Assistant headmaster	2.23	7	2.68	5	0.45	-2	4.65	1.14	1.06
M3 Inspector of schools	2.53	4	3.00	3	0.47	-1	8.69	1.24	0.93
M4 Education officer (SDEO, DEO, etc.)	2.24	6	2.50	7	0.26	1	9.72**	1.23	0.90
M5 Instructor from Teachers Training Center	2.57	2	2.94	4	0.37	2	5.33	1.25	1.00
M6 Specialist from Education Extension Centre	2.54	3	3.42	2	0.88	-1	9.27	1.18	0.77
M7 Foreign advisor	2.22	8	2.05	8	-0.17	0	2.74	1.18	0.94
M8 Peace Corps Volunteer	2.04	9	1.80	9	-0.24	0	9.22	1.57	0.86
M9 Agricultural officers	2.33	5	2.56	6	0.23	1	3.28	1.40	1.06
Average need	2.38		2.72		0.34				
Range of responses	0.69		1.75						

Average need area: 2.44
Degrees of freedom: 4

**Significant at .05 level

IV. The correlation between ranking of the "degree of need" for various classroom visitors and the ranking based on the extent of visitation reflects that there is no relationship between the frequency of visitation and perception of need. This was true both for those teachers who did not have classroom visitors and expressed expectation of future need and those who did have classroom visitors and expressed much need based on experience.

V. Most of the experienced teachers expressed favorable attitudes toward the classroom visitors.

VI. There was appreciable agreement in ranking the degree of need by both groups of teachers, those who experienced a classroom visitor and those who did not.

VII. But teachers who had not experienced a classroom visitor perceived the need for such visitations persistently much lower than those who had experienced a visitor.

VIII. The range of mean values of the inexperienced teachers was 1.32 and of experienced teachers was 0.69.

IX. The first four choices of the experienced teachers for further classroom visitation were: (a) headmaster, (b) instructor from teachers training college, (c) specialist from Education Extension Centre, and (d) Inspector of schools. The first four choices of the inexperienced teachers were: (a) specialist from Education Extension Centre, (b) headmaster, (c) instructor from teachers training college and (d) foreign advisors.

X. The differences in choice between inexperienced and experienced teachers in expressing the need for "specialists from Education Extension Centre" and "foreign advisors" may reflect an assessment of their performance in actual practice.

XI. Both administrators and experienced teachers agreed that the teachers have "average need" (2.43) for various types of classroom visitors.

XII. In seven sub-items the administrators' perception of the need of the teachers was much higher than that of the teachers. But in two sub-items, "foreign advisors" and "Peace Corps Volunteer," the teachers' perceptions of need were higher than those of the administrators, although they ranked them similarly in order of importance. This may have some significance in practical application.

XIII. The disagreements were significant in two sub-items (N1 and N4) but the difference in mean in one sub-item being below .60 indicates its non-significance in practical application. In the other sub-item the difference is above .60, which denotes in reality the higher priority attached by the administrators to "headmasters" visitation in classrooms, and may have some significance in practical application.

XIV. The range of mean values of the teachers' ratings was 0.69 and of the administrators was 1.75 in nine sub-items.

XV. Standard deviations indicate that administrators were more uniform than the teachers in their responses indicating the degree of need.

XVI. The administrators agreed with experienced teachers in the first four choices of classroom visitors, but differed in ranking them (refer to NIX).

XVII. The consultants were closer to the teachers in expressing their mean scores for the headmaster's visitation in the classroom.

O. Use of Community Educational Resources

A wide variety of educational resources is usually available in a community for use by the school. The present study sought to get some idea of the extent of availability and use of such community resources in classroom teaching.

The teachers were requested to indicate availability of each of a list of community educational resources. If the resource was available, then the teacher was requested to indicate his attitude towards that resource. And finally, he was requested to indicate his present feeling about the "degree of need" for this type of resource in light of his experience.

The teachers who did not have available resources were also requested to express the degree of need felt for this type of help, in light of their experience.

The administrators were requested to identify their perceptions of the degree of need of the teachers for each type of community resource available.

The results are summarized and shown in Tables 25 and 26.

Table 25. The Relative Need and Attitude of Teachers for Community Educational Resources

	Resource		Attitude by Teacher Having Resource Avail.					Need by Teacher			
	Not Available	Available	Rank	Like	Uncertain	Do Not Like		Resource Not Available	Rank	Resource Available	Rank
01 Agricultural Extension Service	124 % 55.8	98 44.2	8	76 77.55	19 19.38	3 3.06		2.02	5	2.24	7
02 Agricultural information service	136 % 61.3	86 39.7	9	65 75.58	20 23.25	1 1.16		1.87	9	2.24	8
03 Health officials	89 % 40.0	133 60.0	1	102 76.69	30 22.55	1 0.75		2.57	3	2.84	2
04 Industrial, business or co-operative	141 % 63.5	81 36.5	11	64 79.07	15 18.51	2 2.46		1.94	7	2.35	5
05 Social workers	109 % 49.1	113 50.9	4	92 81.41	21 18.59	0 0		2.21	4	2.28	6
06 Basic democrats	138 % 62.1	84 37.9	10	26 30.95	33 39.28	25 29.76		0.74	13	1.24	13
07 Religious organizations	109 % 49.1	113 50.9	5	94 83.18	17 15.04	2 1.76		1.94	6	2.61	4
08 Political organizations	153 % 68.9	69 31.1	13	30 43.47	20 29.98	19 27.53		0.80	12	9.38	12
09 U.S. Information Service	107 % 48.2	115 41.9	3	77 66.95	35 30.43	3 2.60		1.85	10	2.24	9
010 Pakistan Information Service	112 % 50.5	110 49.5	7	81 73.63	29 26.36	0 0		2.54	2	2.75	3
011 British Information Service	109 % 49.9	113 50.9	6	74 65.48	35 30.97	4 3.53		1.88	8	2.24	10
012 Public Library	102 % 45.9	120 54.1	2	94 78.33	26 21.66	0 0		2.97	1	2.96	1
013 Air Agencies	149 % 67.1	73 32.9	12	45 61.64	27 36.98	1 1.36		1.60	11	1.88	11

Table 26. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: Use of Community Educational Resources

Need Area	Teachers Mean of Need	Teachers Rank of Need	Administrators Mean of Need	Administrators Rank of Need	Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
01 Agricultural Extension Service	2.24	7	2.95	6	0.71	-1	8.66	1.16	1.09
02 Agricultural Information Serv.	2.24	8	3.00	4	0.76	-4	12.52**	1.03	1.07
03 Health officials	2.84	2	3.13	3	0.29	1	9.28**	0.94	0.94
04 Industrial business or co-operative concerns	2.35	5	2.57	7	0.22	2	6.97	1.12	0.93
05 Social workers	2.28	6	3.07	5	0.79	-1	14.30	0.99	0.78
06 Basic democrats	1.24	13	1.71	12	0.47	-1	18.65*	1.29	0.98
07 Religious organizations	2.61	4	2.23	10	-0.38	6	3.08	1.11	1.14
08 Political organizations	1.38	12	0.98	13	-0.40	1	3.61	1.15	0.94
09 United States Information Serv.	2.24	9	2.53	9	0.29	0	2.79	1.04	1.02
010 Pakistan Information Service	2.75	3	3.21	2	0.46	-1	4.05	1.09	0.78
011 British Information Service	2.24	10	2.47	8	0.23	-2	3.20	1.03	1.04
012 Public Library	2.96	1	3.35	1	0.39	0	3.52	1.02	0.81
013 Air agencies (PIA, Pan Am., BOAC, etc.)	1.88	11	2.13	11	0.25	0	2.03	1.14	1.02
Average need	2.25		2.56		0.31				
Range of responses	1.72		2.37						

Average need area: 2.30

Degrees of freedom: 4

*Significant at .01 level
**Significant at .05 level

I. All the teachers indicated individually that at least one type of community educational resource was available for use in the school. But most of the teachers had a wide range of community educational resources available for their use.

II. The most commonly available community educational resources were: (a) health officials, (b) public library, (c) United States Information Service,(d) social workers, and (e) religious organizations. The least available community resources were: (a) political organizations, (b) airlines (PIA, Pan. Am., BOAC, etc.), (c) industrial, business or cooperative concerns, and (d) Basic Democrats.

III. The correlation between ranking of the "degree of need" of various community educational resources and the ranking based on the extent of availability reflect the fact that there was little relationship between the incidence of availability and perception of need.

IV. About 70 percent of the teachers who indicated the availability of a resource also denoted their favorable attitude towards the use of that resource. The remainder were uncertain about their attitude, and a negligible percent had negative reactions. This observation was true for ten resources.

V. In the other three resources, "airlines," "political organizations," and "Basic Democrats," the attitudes of the respondents were more or less equally divided among favorable, unfavorable and uncertain.

VI. Attitude and need may have a direct relationship.

VII. The teachers who had community resources available and the teachers who did not have community resources available, ranked quite similarly the degree of need for these resources.

VIII. Teachers who did not experience the availability of the community resources, however, perceived the need for the resources persistently lower than the experienced teachers.

IX. The range of mean values of the inexperienced teachers was 2.23 and of experienced teachers was 1.72 for thirteen sub-items.

X. The first five choices of the experienced teachers were: (a) public library, (b) health officials, (c) Pakistan Information Service, (d) religious organizations, and (e) industrial, business, and cooperative concerns.

XI. The experienced and inexperienced teachers agreed substantially regarding the three least needed community resources. They were: (a) Basic Democrats, (b) political organizations, and (c) airlines.

XII. Both experienced teachers and administrators agreed that the teachers have "average need" (2.30) for various types of community educational resources.

XIII. The administrators' perception of the need was consistently higher than that of the teachers for all the sub-items except "political organization."

XIV. The differences were statistically significant at the .05 level for two sub-items (02 and 03) and at the .01 level for two sub-items (05 and 06). The differences in mean value

were above .60 in two sub-items ("social workers," "agricul-
tural information service"). These differences may have some
practical significance.

XV. The standard deviations indicate that both teachers and ad-
ministrators were almost uniform in responding to the degree
of need.

XVI. The range of responses among teachers was 1.72 and among ad-
ministrators was 2.37 for thirteen sub-items.

XVII. The administrators agreed with the first three choices of the
experienced and inexperienced teachers (refer to OX). The next
two choices were "social workers" and "agricultural extension
service."

XVIII. The administrators also agreed with teachers in indicating the
three least needed resources (refer to OXI).

XIX. The consultants were close to the teachers in expressing their
mean scores for the need items 02 and 05.

P. In-Service Education Activities

I. All the teachers indicated individually that they have partici-
pated in at least one in-service education activity within the
last three years. However, many teachers participated in a
wide range of in-service education activities (Table 27).

II. The most common in-service education activities participated
in were: (a) individual study(195), followed by(b) workshop
at Education Extension Centre (102), (c) opportunity to observe
others demonstrate teaching (60), (d) East Pakistan Education
Week (56), and (e) teachers conventions or conferences (51).

Table 27.   The Relative Need and Attitude of Teachers for In-Service Education Activities

	In-Service Educ. Activities			Attitude By Participating Teacher			Need by Teachers			
	Not Participated	Participated	Rank	Valuable	Uncertain	Not Valuable	Not Participating	Rank	Participating	Rank
P1 Workshop by Education Extension Center	120 / 54.0	102 / 46.0	2	87 / 86.3	14 / 14.2	1 / 0.5	2.62	1	2.79	4
P2 Short Training Courses by others	183 / 82.4	39 / 17.6	10	35 / 89.74	4 / 10.26	0 / 0	2.23	5	2.82	2
P3 Organized Educational Trip	191 / 86.0	31 / 13.0	13	25 / 80.64	4 / 12.90	2 / 6.45	2.51	2	2.97	1
P4 Student Conventions(Boy Sc. Girl Guides,Std. Ag.etc)	179 / 80.6	43 / 19.4	7	34 / 79.06	9 / 20.94	0 / 0	2.37	4	2.72	6
P5 Intervisitation of schools	200 / 90.0	22 / 10.0	16	16 / 72.72	5 / 22.72	1 / 4.54	2.09	7	2.82	3
P6 Visitation of other classes in the school	179 / 80.6	43 / 19.4	8	35 / 81.39	7 / 16.27	1 / 2.33	1.67	14	2.42	14
P7 Visitations of other classes in another school	203 / 91.4	19 / 8.6	19	14 / 73.68	3 / 15.78	2 / 10.52	1.74	12	1.79	21
P8 Opportunity to observe others demonstrate teaching	162 / 70.0	60 / 27.0	3	49 / 81.66	9 / 15.00	2 / 3.36	2.40	3	2.60	9
P9 Evening or Night classes at nearby educ. inst.	206 / 97.7	16 / 7.3	20	13 / 81.25	3 / 18.75	0 / 0	1.71	13	2.56	10
P10 Holiday Class (Sunday or Friday)	201 / 90.5	21 / 9.5	18	18 / 85.71	1 / 4.76	2 / 9.52	1.00	20	2.00	20
P11 Courses during vacations (Ramzan, summer, etc.)	192 / 86.4	30 / 13.6	14	25 / 83.33	2 / 6.67	3 / 10.00	1.26	19	2.40	15
P12 Guest Speakers	173 / 77.9	39 / 22.1	11	29 / 74.35	8 / 20.57	2 / 5.12	1.51	17	2.39	16
P13 Correspondence work	200 / 90.0	22 / 10.0	17	20 / 90.00	2 / 10.00	0 / 0	1.56	16	2.32	17
P14 East Pakistan Education Wk.	166 / 74.7	56 / 25.3	4	50 / 89.28	5 / 8.92	1 / 1.78	2.08	8	2.68	8

Table 27. Continued

In-Service Educ. Activities			Attitude By Participating Teacher			Need by Teachers			
Not Participated	Participated	Rank	Valuable	Uncertain	Not Valuable	Not Participating	Rank	Participating	Rank
P15 Meetings of Prof. Societies 182 (81.9)	40 (18.1)	9	33 (82.50)	7 (17.50)	0 (0)	1.81	11	2.46	13
P16 Teachers' Conventions or conferences 171 (77.0)	51 (23.0)	5	42 (82.35)	8 (15.68)	1 (1.96)	2.23	6	2.69	7
P17 School Committees on prof. improve. matters 178 (80.2)	44 (19.8)	6	35 (79.54)	8 (18.18)	1 (2.27)	1.96	10	2.50	12
P18 Faculty Meeting directed to prof. improve. 184 (82.8)	38 (17.2)	12	30 (78.94)	8 (23.52)	0 (0)	1.97	9	2.74	5
P19 Off Campus Courses for credit 212 (95.5)	10 (4.5)	21	8 (80.0)	2 (20.00)	0 (0)	1.27	18	2.20	19
P20 Consultations & Conf. with Agr. Ofc. regularly 197 (88.7)	25 (11.2)	15	19 (76.0)	6 (24.00)	0 (0)	1.64	15	2.56	11
P21 Individual Study 27 (12.1)	195 (87.9)	1	104 (53.33)	87 (44.07)	4 (2.05)	----	--	2.31	18

III. The least common in-service education activities were: (a) off campus courses for credit (10), (b) evening or night classes (16), (c) visitation of other classes in another school (19), (d) holiday class (21), and (e) correspondence work (22).

IV. The correlation between the ranking of the "degree of need" for various in-service education activities and the ranking based on the extent of participation reflect that there was little relationship between the extent of participation and perception of need.

V. Over 70 percent of the teachers who participated in an in-service education activity indicated a favorable attitude towards that activity. The remainder were uncertain about their attitude, and a very negligible number had negative reactions. This observation was true for all the in-service education activities except "individual study." The attitude on individual study was almost equally divided between "valuable" (53 percent) and "uncertain (45 percent). This apparently favorable attitude of the teachers for all in-service education activity may denote their earnest desire to grow and develop professionally.

VI. Both participating and non-participating teachers ranked almost similarly the need of each in-service education activity.

VII. The participating teachers, however, perceived the need of the in-service activities as consistently higher than did the non-participating teachers.

VIII. The range of responses of the participating teachers was 1.18 and the non-participating teachers was 1.92 for twenty-one sub-items.

IX. The first seven choices of the participating teachers were: (a) organized educational trip, (b) short training courses by others, (c) intervisitation of schools,(d) workshop by Education Extension Centre, (e) faculty meetings directed to professional improvement, (f) student conventions, and (g) teachers conventions or conferences.

X. The non-participating teachers made the same six choices but replaced "faculty meetings directed to professional improvement" by "opportunity to observe others demonstrate teaching." However, they differed from participating teachers in their rankings of these choices.

XI. Although participating teachers denoted favorable attitudes to activities like "holiday class," "correspondence work," "off-campus courses for credit," and "guest speakers," the need expressed both by participating and non-participating teachers for these activities does not seem to be very encouraging. These differences may have some practical significance.

XII. Both participating teachers and administrators agreed that teachers have "more need" (2.59) for various types of in-service education activities (Table 28).

XIII. The administrators' perception of the need for these activities was persistently higher than was the teaches' perception.

Table 28. Perception of Need by Teachers and by Administrators for Teachers in the Need Area: In-Service Education Activities

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
P1 Workshop by Ed.Ext. Centre	2.79	4	3.44	2	0.65	-2	9.54	1.15	0.79
P2 Short training course by oth.	2.82	2	3.41	3	0.59	1	5.48	1.25	0.73
P3 Organized educational trip	2.97	1	3.11	7	0.14	6	6.85	0.95	0.66
P4 Student conventions	2.72	6	3.05	10	0.33	4	3.85	0.85	0.90
P5 Intervisitation of schools	2.82	3	3.35	4	0.43	1	6.31	0.85	0.59
P6 Visitation of other classes	2.42	14	2.74	17	0.32	3	8.00	0.96	0.66
P7 Visit. of other schools	1.79	21	2.58	19	0.79	-2	10.46**	0.79	0.69
P8 Observing others demon.teach.	2.60	9	3.29	6	0.59	-3	8.20	1.06	0.75
P9 Evening classes at nearby educational institutions	2.56	10	2.69	18	0.13	8	4.90	0.96	1.30
P10 Holiday class (Sun. or Fri.)	2.00	20	1.94	21	-0.06	1	7.43	1.52	0.94
P11 Courses during vacations	2.40	15	2.41	20	0.01	5	4.26	1.35	1.05
P12 Guest speakers	2.39	16	3.04	11	0.65	-5	8.13	1.00	0.98
P13 Correspondence work	2.32	17	2.84	14	0.52	-3	10.13**	0.95	0.90
P14 East Pakistan Education Wk.	2.68	8	2.83	15	0.15	7	2.12	1.10	0.96
P15 Meet. of professional soc.	2.46	13	2.89	13	0.33	0	4.63	1.07	0.74
P16 Teachers' conventions or conf.	2.69	7	3.35	5	0.66	-2	7.44	1.12	0.75
P17 School Com. on professional improvement matters	2.50	12	3.11	8	0.01	-4	6.26	1.15	0.85
P18 Faculty meet. dir. to prof. improvement	2.74	5	3.48	1	0.74	-4	11.33**	1.03	0.98
P19 Off campus courses for credit	2.20	19	2.80	16	0.60	-3	2.90	1.32	0.94
P20 Consultation and conf. with agricultural officers reg.	2.56	11	2.94	12	0.38	1	4.56	1.16	1.00
P21 Individual study	2.31	18	3.07	9	0.76	-9	26.46*	1.32	0.89
Average need	2.51		2.97		0.46				
Range of responses	1.18		1.54						

Average need area: 2.59
Degrees of freedom: 4

*Significant at .01 level
**Significant at .05 level

XIV. The differences were statistically significant at the .05

level for four sub-items (P1, P7, P13 and P18) and the .01

level for one item (P21). The differences in means were

above .60 in four items (workshop by Education Extension

Centre, visitation of other classes in another school,

faculty meetings directed to professional improvement and

individual study). However, the rankings by both groups

were quite similar except for "individual study." In

reality, it indicates the administrators' greater enthusiasm

for these activities and may not have any practical signific-

ance.

XVI. The standard deviations indicate that both teachers and ad-

ministrators were uniform in responding to the degree of need.

XVII. The range of responses among participating teachers was 1.18

and among administrators was 1.54 for the twenty-one sub-items.

XVIII. The first six choices of the administrators were similar to

those of the experienced teachers but the teachers replaced

the "student conventions" with "opportunity to observe others

demonstrate teaching" (refer to PIX). However, the adminis-

trators differed widely with the participating teachers in

ranking. These differences may cause some practical concern.

Q. Administrators' Education Needs

Like teachers, administrators also need refresher courses or

additional training in some areas of their responsibility. In order to

determine the in-service education needs of the administrators, the

teachers and administrators were requested to indicate their opinions with

regard to the need for in-service education by administrators in five areas on the five point rating scale. The areas were:

1. Personality as an administrator

2. Curriculum

3. Management and supervision of various group subjects

4. Administration and supervision

5. Co-curricular activities

Q1. Personality as Administrator

I. Both administrators and teachers agreed that the administrators have "more need" (2.50) to increase their strength of personality as an administrator (Table 29).

II. However, the administrators' perception of their own need was consistently higher than the teachers'.

III. Both administrators and teachers perceived the needs of administrators in this area as higher than the teachers' (refer to E11).

IV. Both teachers and administrators ranked similarly the six sub-items in the group. Their differences were statistically significant at .05 level for two sub-items (Q1c and Q1f). In reality this difference in mean value above .60 denotes the administrators' own desire to increase their ability to improve home, school and community living and may have little or no practical significance.

V. The standard deviations denote that administrators were more uniform than the teachers in responding to the degree of need.

Table 29. Perception of Need by Teachers and by Administrators for Administrators in the Need Area: Personality as an Administrator

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
Q1a Work with students	2.34	4	2.82	4	0.52	0	6.69	1.32	1.30
Q1b Work with teachers	2.61	1	3.07	2	0.36	1	5.88	1.32	1.21
Q1c Work with members of the community	2.23	6	2.16	6	0.53	0	12.56**	1.27	1.00
Q1d Behave in a friendly manner regardless of personal problems	2.30	5	2.82	5	0.52	0	8.49	1.36	1.28
Q1e Lead a good life, to enjoy work and play	2.41	3	3.02	3	0.61	0	9.11	1.34	1.20
Q1f Improve home, school and community living	2.59	2	3.27	1	0.68	-1	12.97**	1.29	0.96
Average need	2.41		2.96		0.55				
Range of responses	0.38		0.51						
Average need area:	2.50								
Degrees of freedom:	4								

**Significant at .05 level

VI. The range of responses of the administrators was 0.51 and of the teachers 0.38 for the six sub-items.

VII. However, the teachers gave more importance to the "administrators' ability to work with the teachers" (rank first) than the administrators (rank second). The administrators' top choice was "the ability to improve home, school and community." Administrators were more consistent in their responses (refer to E) in this need area both for the teachers and administrators.

Q2. Curriculum

I. Both the administrators and teachers agreed that administrators have "more need"(2.52) to develop an increased understanding of the curriculum (Table 30).

II. The administrators perceived their own need as consistently higher than the teachers did.

III. The administrators and teachers ranked the seven sub-items of the group similarly. The differences were statistically significant at .05 level for two sub-items (Q2d and Q2f) and at .01 level for two sub-itesm (Q2c and Q2e). However, three sub-items had differences in mean values above .60. This indicates the administrators' eagerness for further learning and may not have any practical significance.

IV. The standard deviations indicate the administrators were more uniform in responding to the degree of need than the teachers.

Table 30. Perception of Need by Teachers and by Administrators for Administrators in the Need Area: Curriculum

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
Q2a Basic philosophy and concepts of new education system	2.60	2	3.07	4	0.47	2	5.34	1.33	1.05
Q2b Responsibilities for implementation of new curriculum	2.56	3	3.13	3	0.57	0	9.19	1.27	1.06
Q2c Leadership role in planning, executing and evaluating new program	2.66	1	3.36	1	0.70	0	14.38*	1.25	1.03
Q2d General scheme of studies	2.27	6	2.80	6	0.53	0	10.23**	1.21	1.08
Q2e Implementation and use of new syllabus	2.45	4	3.09	2	0.64	-2	14.87*	1.20	1.02
Q2f Use of new textbook	2.09	7	2.76	7	0.67	0	12.08**	1.29	1.26
Q2g Appraisal of prob. that are being faced by teachers and administrators in implementation of new curriculum	2.41	5	2.96	5	0.59	0	8.87	1.22	1.13
Average need	2.43		3.02						
Range of responses	0.57		0.60						
Average need area: 2.53									
Degrees of freedom: 4									

*Significant at .01 level
**Significant at .05 level

V. The range of responses of the administrators was .60 and of the teachers was .57 for the seven sub-items.

VI. Both administrators and teachers gave top ranking to the administrators' "leadership role in planning, executing and evaluating new programs," followed by "implementation and use of new syllabus" and "responsibilities for the implementation of new curriculum."

Q3. Management and Supervision of Courses

I. Both administrators and teachers agreed that the administrators have "average need" (2.21) for management and supervision of different group courses (Table 31).

II. The administrators rated their own needs consistently higher than did the teachers.

III. The differences were statistically significant at .05 level for two sub-items (Q3b and Q3g) but the difference in mean values being below .60 denotes its non-significance in practical application.

IV. The standard deviations denote that administrators and teachers were equally uniform in responding to the degree of need.

V. The range of responses of the administrators was 1.04 and teachers was 0.89 for the thirteen sub-items.

VI. The four top choices of the administrators for supervision and management of courses were: (a) science group, (b) agriculture group, (c) industrial arts group, and (d) humanities group.

Table 31. Perception of Need by Teachers and by Administrators for Administrators in the Need Area: Management and Supervision of Courses

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Administ.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
Q3a Humanities group	2.14	5	2.64	4	0.54	-1	6.13	1.35	1.23
Q3b Science group	2.70	1	3.27	1	0.57	0	10.43**	1.32	0.91
Q3c Commerce group	2.14	6	2.52	5	0.38	-1	4.85	1.46	1.36
Q3d Industrial technical group	2.28	2	2.65	3	0.37	1	3.38	1.57	1.46
Q3e Languages group	2.01	7	2.49	6	0.48	-1	7.70	1.33	1.44
Q3f Home economics group	2.01	8	2.42	7	0.41	-1	4.44	1.42	1.43
Q3g Nursing group	1.81	10	2.30	8	0.49	-2	12.32**	1.46	1.35
Q3h Islamic studies group	2.22	3	2.26	9	0.04	6	5.35	1.39	1.20
Q3i Military science group	1.90	9	2.23	10	0.33	1	4.38	1.48	1.52
Q3j Agriculture group	2.19	4	2.80	2	0.61	-2	9.13	1.46	1.21
Average need	2.14		2.55		0.41				
Range of responses	0.89		1.04						

Average need area: 2.21

Degrees of freedom: 4

**Significant at .05 level

VIII. Teachers accepted the first three choices of the administrators but replaced "humanities group" by "Islamic studies."

Q4. Administration

I. Both the administrators and teachers agreed that the administrators have "average need" (2.40) for further learning in the area of administration (Table 32).

II. The administrators in contrast to the teachers perceived their own need consistently higher than the teachers.

III. The conflicts were statistically significant at .05 level for four sub-items (Q8, Q9, Q12 and Q16) and at .01 level for one sub-item (Q4). The differences in mean value are above 0.60 in one sub-item (guidance and counseling) and this may not have any practical significance.

IV. The standard deviations denote that the administrators were almost equally uniform with teachers in responding to the degree of need.

V. The range of responses of the administrators was 0.70 and teachers was 0.86 for the thirteen sub-items.

VI. The four top choices of the teachers were: (a) new ideas in examination methods, (b)guidance and counseling, (c) leadership, and (d) school development programs.

VII. The four top choices of the teachers were: (a) school development programs, (b) new ideas in examination methods, (c) audio-visual methods in instruction, and (d) research and evaluation.

Table 32. Perception of Need by Teachers and by Administrators for Administrators in the Need Area: Administration

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Administ.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
Q4 Guidance and counseling	2.16	11	2.98	2	0.82	-9	18.80	1.35	1.01
Q5 School finance and budgeting	2.30	7	2.84	6	0.54	-1	6.32	1.39	1.17
Q6 Staff organization and office management	2.38	5	2.84	5	0.46	0	5.70	1.38	1.24
Q7 School development programs	2.78	1	2.96	3	0.18	2	4.13	1.21	1.17
Q8 Leadership	2.37	6	2.89	4	0.42	-2	9.87**	1.28	1.32
Q9 Audio visual methods of instruction	2.45	3	2.73	9	0.28	6	10.42**	1.29	0.86
Q10 Research and evaluation	2.41	4	2.76	7	0.35	3	4.09	1.25	1.09
Q11 The process of curriculum change	2.20	10	2.64	11	0.44	1	6.18	1.24	1.00
Q12 New ideas in exam. methods	2.57	2	3.13	1	0.56	-1	9.81**	1.26	1.01
Q13 School laws and regulations	2.29	8	2.60	12	0.31	4	2.21	1.35	1.29
Q14 Policy formulation and demo-cratic decision-making	2.14	12	2.73	10	0.59	-2	8.55	1.33	1.18
Q15 Professsional ethics	1.92	13	2.33	13	0.31	0	4.34	1.30	1.33
Q16 Schools as instruments for social change	2.24	9	2.76	8	0.51	-1	9.78**	1.30	1.11
Average need	2.32		2.78		0.46				
Range of responses	0.64		0.53						

Average need area: 2.40
Degrees of freedom: 4

**Significant at .05 level

Q5. Co-Curricular Activities

I. Both the administrators and teachers agreed that the administrators have "average need" (2.42) for further learning in the area of co-curricular activities (Table 33).

II. The administrators rated their own needs consistently higher than the teachers did.

III. The differences were statistically significant at .05 level for one sub-item (Q19) and .01 level for two sub-items (Q17 and Q18). The differences in mean value being below 0.60 denotes their non-significance in practical application.

IV. The standard deviations indicate that the administrators were more uniform than the teachers in responding to the degree of need.

V. The range of responses of the administrators was 0.60 and of the teachers was 0.38 for the five sub-items.

VI. The three top choices of the administrators were: (a) organization of school library, (b) organization of program for manual work, and (c) organization of experimental research in classroom.

VII. The teachers' top choices for administrators were similar to the administrators' but they replaced "organization of experimental research in classroom" by "arrangement of field trips." It seems that the teachers have a soft corner for field trips (refer to DVIII).

Table 33. Perception of Need by Teachers and by Administrators for Administrators in the Need Area: Co-Curricular Activities

	Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need					
Q17 Organization of experimental research in classroom	2.24	4	2.80	3	0.56	-1	16.32*	1.26	0.94
Q18 Organization of programs for manual work	2.16	5	2.73	4	0.57	-1	18.76*	1.20	0.96
Q19 Organization of school library	2.52	1	3.11	1	0.59	0	10.26**	1.19	0.96
Q20 Arrangement of field trips	2.34	3	2.51	5	0.17	2	4.34	1.17	0.99
Q21 Organization of "students week," "education week," "science fair," etc.	2.43	2	3.00	2	0.57	0	9.36	1.27	1.15
Average need	2.33		2.83		0.50				
Range of responses	0.36		0.60						

Average need area: 2.42
Degrees of freedom: 4

*Significant at .01 level
**Significant at .05 level

R. Library Facilities

Administrators and teachers were requested to indicate the degree of need in their opinion regarding the various aspects of their school libraries. The results are summarized and shown in Table 34.

I. Both teachers and administrators agreed that the school library has "more need" (2.99) for availability of various facilities.

II. The teachers and administrators perceived almost equally the degree of need in this area. The teachers rated very high (average 2.94) compared to their own rating in previous need areas. The administrators (average of 3.26) seemed to continue their tendency for a higher rating in this need area also. The comparatively higher rating of this need felt by the teachers seems to be very significant and may express their earnest desire to learn individually through library resources.

III. The differences were statistically significant at .05 level in three sub-items (R5, R7 and R13), but the ranking of these items and the differences in mean value, which were below 0.60, reflect that these differences may not have any practical significance.

IV. The standard deviations denote that the teachers and administrators were almost equally uniform in responding to the degree of need.

V. The range of responses of the teachers was 1.30 and the administrators was 0.89 for the fourteen sub-items.

Table 34. Perception of Need by Teachers and by Administrators for: Library Facilities

	Teachers Mean of Need	Teachers Rank of Need	Administrators Mean of Need	Administrators Rank of Need	Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
R1 Larger number of books	3.17	4	3.22	8	.05	4	6.47	1.05	0.75
R2 Books of better quality	3.42	2	3.67	2	.25	0	3.42	0.86	0.56
R3 Books of recent publication	3.27	3	3.49	3	.22	0	2.74	0.89	0.69
R4 Books that are more useful to students	3.57	1	3.67	1	.10	0	5.13	0.76	0.48
R5 Convenient access to books	2.46	13	3.07	12	.51	-1	10.92**	1.29	1.12
R6 Arrangement of library hours for the convenience of the teachers	2.93	8	3.16	10	.23	2	4.36	1.07	1.09
R7 Arrangement of library hours for the convenience of the students	2.83	10	3.33	7	.50	-3	13.17**	1.09	1.04
R8 Books in your field of interest	2.75	11	3.13	11	.38	0	5.13	1.15	0.87
R9 Liberal lending policy	2.27	14	2.78	14	.51	0	8.13	1.31	1.04
R10 Opportunity of reading time during working hours	2.57	12	2.76	13	.19	1	6.74	1.25	1.09
R11 Current magazines or journals	2.98	6	3.38	5	.40	-1	6.81	1.04	0.81
R12 Newspapers	2.96	7	3.22	9	.26	2	2.51	1.16	1.02
R13 More training for the librarian	2.87	9	3.33	6	.48	-3	10.40**	1.17	0.95
R14 A trained librarian	3.09	5	3.47	4	.38	-1	5.65	1.19	1.01
Average need	2.94		3.26						
Range of responses	1.30		0.89						

Average need area: 2.99
Degrees of freedom: 4

**Significant at .05 level

VI. The first three choices of the teachers and administrators were "books that are more useful for students," "books of better quality" and "books of recent publication."

VII. However, in further ranking administrators expressed the need for a "trained librarian" and "current magazines and journals" whereas the teachers felt a need for a "larger number of books" and a "trained librarian."

VIII. Both administrators and teachers had the same choices for the four least need facilities. They were: (a) books in your (respondent's) field of interest,* (b) convenient access to books; open shelf system, (c) opportunity of reading time during working hours, and (d) liberal lending policy.

S. Limiting Factors in In-Service Education

In order to determine the factors that may limit the attendance and participation of teachers in in-service education programs arranged by the East Pakistan Education Extension Centre, the respondents were requested to indicate the degree of limitation of seventeen limiting factors. The results are summarized in Table 35.

I. Both administrators and teachers agreed that all these seventeen factors have "average limitations," (1.99) for regular attendance in an in-service education program.

II. However, the administrators and teachers differed widely within themselves in rating individual items. These inter- and intra-differences may signify the apparent lack of unanimity within and between the two occupational groups on the relative

---

*The term "your" denotes the respondent's own field of interest. The purpose of using the phrase "yours" was to determine how personal interest may reflect in rating. It seems that personal interest did.not have much bearing on ratings.

Table 35. Perception by Teachers and by Administrators for Teachers in the Area: Limiting Factors in In-Service Education

	Teachers Mean of Limitations	Teachers Rank of Limitations	Administrators Mean of Limitations	Administrators Rank of Limitations	Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
S1 Teachers too busy with school work	2.42	5	2.82	2	.40	-3	4.87	1.32	1.19
S2 Limited govern. travel grants	2.59	3	2.52	4	-.07	1	1.85	1.34	1.39
S3 Limited govt. daily allowance while in training	2.79	1	2.96	1	.17	0	2.42	1.25	1.28
S4 Teachers do not feel the need to participate	1.29	12	1.40	9	.11	-3	1.02	1.30	1.40
S5 No substitute teacher to take care of classes	2.05	6	2.73	3	.68	-3	10.41**	1.41	1.14
S6 Few workshops are held by Education Extension Centre	1.89	7	1.36	10	-.53	3	10.52**	1.34	1.33
S7 Time of workshop is not suitable	1.63	9	1.56	7	-.70	-2	4.32	1.35	1.20
S8 No or few invitations are received from Education Ext. Centre	1.67	8	1.18	11	-.49	3	6.58	1.28	1.19
S9 Teachers who attended programs by EEC did not find work helpful	1.30	11	0.87	12	-.43	1	9.15	1.31	1.24
S10 Family responsibilities	2.45	4	2.40	6	-.05	2	4.49	1.41	1.23
S11 Private tuition consumes all time	1.36	10	1.56	8	-.20	-2	11.54**	1.43	1.27
S13 Non payment of expenses immediately after the workshop	2.66	2	2.56	5	-.10	3	2.05	1.47	1.44

Table 35. Continued

	Teachers Mean of Limitation	Teachers Rank of Limitation	Administrators Mean of Limitation	Administrators Rank of Limitation	Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Administs.
Workshops limit attendance to:									
S12a two weeks	1.12	5	0.82	5	-.72	0	4.32	1.39	1.34
S12b three weeks	1.16	4	1.07	4	-.09	0	4.72	1.30	1.23
S12c four weeks	1.41	3	1.47	3	.06	0	1.87	1.38	1.27
S12d three months	1.85	2	2.18	2	.33	0	4.65	1.53	1.45
S12e one year	2.15	1	2.78	1	.61	0	5.70	1.73	1.63
Average limitation	2.00		1.99						
Range of responses	1.50		2.09						
Average limitations of area: 1.99									
Degrees of freedom: 4									

**Significant at .05 level

importance of various limiting factors. How far these differences would have practical significance could not be assessed.

III. The differences were statistically significant at .05 level in three sub-items (S5, S6 and S11). But the differences in mean value were above 0.60 in one sub-item only (no substitute teacher to take care of classes) and this may have some practical significance.

IV. The standard deviations denote that both teachers and administrators were equally uniform in responding to the degree of need.

V. The range of responses of the teachers was 1.50 and of the administrators was 2.19 for the thirteen sub-items.

VI. The first five limiting factors by teachers were: (a) limited government daily allowances while in training, (b) non-payment of expenses immediately after the workshops, (c) limited government travel grant, (d) family responsibilities, and (e) teachers too busy with the demands of school work.

VII. The administrators agreed with teachers in four factors although they differed in ranking them, but replaced "family responsibilities" by "no substitute teachers to take care of classes."

VIII. Both administrators and teachers agreed similarly on the limitation of attendance due to duration of the courses. The order of limitations were: "one year," "three months,"

"four weeks," "three weeks," and "two weeks." However, the
range of limitations between "two weeks" and "four weeks" by
teachers was 0.29 and by administrators was 0.65. These dif-
ferences may signify the unwillingness of the administrators
to permit teachers to attend courses of long duration.

IX. It appears that many of the factors tending to limit the
participation of teachers in in-service education activities
could be eliminated by better organization and planning and
by modifying traditional practices and regulations.

T. Role of Teachers

I. Both teachers and administrators agreed equally on the role
of teachers in East Pakistani schools and the activities
that should be included in the teachers' program (Table 36).

II. The administrators' perception of the role of teachers was
consistently higher than the teachers' perception.

III. The differences were statistically significant at .05 level
for two items (T2 and T8) and .01 level for three items
.(T1, T3 and T7). These differences denote the difference be-
tween a function that "should be done" and one that "must be
done" which in reality is a difference in relative emphasis.
So this difference may not have any practical significance.

IV. The standard deviations indicate that the administrators
were more uniform than the teachers in responding to the role
of teachers.

Table 36. Perception of Role by Teachers and by Administrators on: Role of Teachers

		Teachers		Administrators		Differences Between Means	Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
		Mean of Need	Rank of Need	Mean of Need	Rank of Need					
T1	To teach high school students	4.07	1	4.76	1	0.69	0	18.66*	1.10	0.57
T2	To guide and advise students on their personal and instructional problems	3.85	2	4.47	2	0.62	0	12.60**	1.14	0.66
T3	To participate in both group and individual conferences with guardians	3.44	5	3.64	6	0.20	1	13.56*	1.08	0.71
T4	To visit homes of students	3.29	7	3.58	7	0.29	0	4.21	1.25	1.06
T5	To serve on curriculum or other committees for the improvement of school programs	3.49	4	3.89	4	0.40	0	9.39	1.06	0.78
T6	To work as an educational leader in the community	3.44	6	3.82	5	0.38	-1	7.15	1.16	0.91
T7	To help with school's clerical work	2.16	8	2.64	8	0.48	0	13.96*	1.13	1.00
T8	To work and continue his own further education	3.76	3	4.11	3	0.35	0	10.04**	1.17	0.75

Degrees of freedom: 5

*Significant at .01 level
**Significant at .05 level

V. The teachers and administrators agreed that seven roles

should be performed by the teachers in the following order

of preference: (1) To teach high school students; (2) to

guide and advise students on their personal and instructional

problems; (3) to work and continue their own further education;

(4) to serve on curriculum and other committees for the im-

provement of school program; (5) to work as educational

leaders in the community; (6) to participate in both groups

and individual conferences with guardians; (7) to visit homes

of students.

VI. Both teachers and administrators were undecided whether or not

teachers should "help with the schools' clerical work."

U. Reactions to the Teaching Profession

Are the teachers and administrators of secondary schools of East

Pakistan satisfied with their jobs? This has long been a pertinent ques-

tion. The present study tried to understand and measure their satis-

factions.

The instrument (instrument B, part U) used to arrive at job satis-

faction scores was adapted for the East Pakistan situation from a ques-

tionnaire used by Robert Hoppock[1] in his study of job satisfaction at New

Hope, Pennsylvania. Hoppock reported that the items discriminated between

satisfied and dissatisfied workers; the test had a reliability of 0.87.

---

[1]Robert Hoppock, "Job Satisfaction Researchers of 1960," Personnel
and Guidance Journal, Vol. XL, No. 4 (December, 1961), p. 373.

The four-question inquiry used in this study was also used by Juan Robles[1] and William Allen Householder.[2] Both of them have expressed their confidence in the reliability of this instrument.

Hoppock[3] defined job satisfaction as any combination of psychological, physiological, and environmental circumstances that causes a person truthfully to say, "I am satisfied with my job."

According to Table 37, twenty-one teachers and two administrators scored twelve or below out of a possible twenty, which was the median score on the dissatisfaction-satisfaction continuum. The actual percentages of dissatisfied teachers and administrators were 10.8 percent and 6.6 percent respectively.

Hoppock[4] states that the percentage of dissatisfied workers in the United States fluctuates between twelve and thirteen percent and that studies in foreign countries indicate dissatisfaction may average as high as 29 percent.

Householder[5] reported that the percentage of dissatisfied graduates was 18 percent for a Panamanian school of agriculture.

---

[1]Juan Robles, "The effects of a Special Program of Teacher Education and Supervision Upon Job Satisfaction of Vocational Agricultural Instructors of Puerto Rico " (unpublished Ph.D. dissertation, Pennsylvania State University, 1959), Chapter VI.

[2]William Allen Householder, "An Evaluation of Work Experience Programs as an Element of Agricultural Education in a Panamanian School of Agriculture" (unpublished Ph.D. dissertation, Michigan State University, 1965), Chapter V, p. 69.

[3]Robert Hoppock, Job Satisfaction (New York: Harper & Brothers, 1935), pp. 267-269.

[4]Ibid., p. 361.

[5]Householder, op. cit., p. 69.

Table 37. Distribution of Scores on: Reactions to the Teaching Profession

| | Score | Teacher N-222 | | Administrator N-45 | |
		No.	Percent	No.	Percent
Dissatisfied	4-8	5	2.25	--	----
	9-12	19	8.55	3	6.6
Satisfied	13-16	102	45.95	10	22.22
	17-20	96	43.25	32	71.12

Compared with universes of American and foreign workers and graduates of a Panamanian school, it may be inferred that the present sample of teachers and administrators of East Pakistan have a higher percentage of satisfied workers. This finding is contrary to the present widespread opinion regarding the nonsatisfaction of teaching personnel with their jobs.

Standard for Salary Increase or Promotions

I. There is no evidence, from this study, that the educational administrators in East Pakistan are significantly different from secondary school teachers in their perception of the importance of selected standards for determining salary increases or promotions in an East Pakistani secondary school (Table 38).

II. However, the educational administrators in this sample tended to rate the standards consistently higher as shown by mean scores on the scales than the teachers did.

150

Table 38. Perception of Importance of Some Standards for Salary Increase or Promotions in East Pakistani Schools By Teachers and By Administrators

	Teachers		Administrators		Differences Between Ranks	Chi Square	S.D. Teachers	S.D. Adminis.
	Mean of Need	Rank of Need	Mean of Need	Rank of Need				
Advanced Degree	1.69	6	2.07	5	1	5.17	1.49	1.37
Training in T.T.C.	2.64	1	3.02	1	0	5.12	1.42	1.29
Training at E.E.C.	1.49	7	1.62	6	1	2.29	1.48	1.40
Promise and Merit	1.72	5	2.22	4	1	5.23	1.41	1.46
Professional Writing	0.95	9	1.31	7	2	13.02**	1.11	1.24
Ed. Travel	1.19	8	1.02	9	-1	4.48	1.37	1.18
Good Teaching	2.19	3	2.69	2	1	6.61	1.53	1.38
Seniority	2.28	2	2.51	3	-1	3.67	1.39	1.20
Favoritism by Superior	1.82	4	1.22	8	-4	7.91***	1.60	1.38
Degrees of Freedom: 4								

**Significant at .05 level
***Significant at .10 level

III. Although the differences between administrators and teachers were statistically significant at the .10 level for the standard, "favoritism by superior," and at the .05 level for "professional writing," the actual differences between means were only 0.60 and 0.36 respectively. These two differences have little practical significance. The consultants were closer to the teachers in expressing their mean scores on these items.

IV. Training in a teachers training college seemed to be the most important standard for promotion and salary increase in an East Pakistani school.

V. Seniority and good teaching were the next two important factors. However, administrators considered "seniority" as a more important factor than "good teaching," as opposed to the teachers' belief. The teachers' preference for good teaching may be explained by the fact that most of the teachers are younger than administrators in age and experience, and thus they consider seniority as a deterrent factor.

VI. The three least important factors as rated by administrators were: (a) professional writing, (b) favoritism by superiors, and (c) educational travel; and by the teachers as: (a) training in Education Extension Centre, (b) educational travel, and (c) professional writing.

VII. The standard "advanced degrees like M.A., and M.Sc." were considered of approximately equal importance by both groups.

Part Two

Part Two is an attempt to provide a case study of the East Pakistan Education Extension Centre. It is based on a compilation of all available facts gathered by the researcher during his field trip, December 29, 1964 to March 19, 1965. Because he has been an employee of the Centre for one and one-half years, a special effort was made to maintain an objective point of view.

Function of the Education Extension Centre

The designers of the Education Extension Centre[1] planned that the Centre would have responsibility for developing, arranging and coordinating a program of in-service education for teachers, headmasters, inspectors and other educational administrators. They perceived the following functions for the Centre:

1. To increase the knowledge and teaching skills of experienced and inadequately trained teachers through short intensive courses.

2. To enable inspectors and other education officers to acquire better understanding of present-day needs for education and greater skill in discharging their responsibilities for improving teaching and school administration.

3. To train headmasters in procedures for expanding the offerings of schools in science and technical fields, developing greater initiative and responsibility on the part of students, helping teachers to improve instruction, and provide better administration and supervision generally.

---

[1]Government of East Pakistan, Scheme for Establishment of Education Extension Centre for East Pakistan (Dacca: East Pakistan Government Press), pp. 5-7.

4. To provide refresher courses for teachers at teacher training colleges.

5. To organize conferences for top-ranking officers.

6. To stimulate and guide the proposed multi-lateral courses in pilot secondary schools.

7. To assist professional groups and education institutions to plan and carry out programs of in-service education for their members.

8. To disseminate among educational officers and teachers knowledge of modern instructional materials and reports or promising new developments in Pakistani schools.

However, in reality the Centre, in its five years of existence, has moved forward surprisingly and charged itself with further responsibilities:

9. Arrangement for instruction in appropriate institutions in methods of teaching vocational and technical subjects in secondary schools for those already technically proficient in such fields as agriculture, commercial subjects, home economics and industrial arts.

10. Provision of intensive training for selected teachers from secondary schools to introduce modern educational methods and higher quality of instruction in mathematics, science, language, social studies and other general education subjects.

11. Extension of facilities to individual teachers and administrators and groups of teachers and school administrators who desire to enhance their professional growth.

12. Provision of consultant services to the schools who need and request such help.

Objectives of In-Service Education at
Education Extension Centre

The objectives of in-service education through workshops and
other media have also undergone quite a transformation as the Centre
learned by trial and error during its early years. The purposes of
the various workshops in the early 60's were:[1]

a. "Development" and understanding of the nature of the subject
matter, evaluation, etc.

b. "Development" of skill in constructing teaching units, using
varieties of teaching techniques, etc.

c. "Development" of ability to teach, to adopt new teaching
methods, etc.

d. "Development" of appreciation of the importance of individual
differences, etc.

The key words written in these objectives conveyed the authoritarian
tendency of "developing" the understanding, ability, skill and appreciat-
ion of various teaching factors, an unexpressed but a strong motivation
of "telling what to do."

The tendency has changed through experience as is reflected in the
newer objectives of the workshops. The key words now are "to acquaint,"
"to identify," "to discuss," "to orient," or "to create awareness" of
educational problems and policies of the present day.[2]

_____

[1]"Workshop for Teachers for Social Studies," September 6-17, 1960.
(Program Mimeographed.)

[2]Workshop programs for "Study Conference of Heads of Pilot Schools,"
March 17-25, 1965; "18th Workshop for Arts & Crafts Teachers of High
Schools," February 8-27, 1965; "26th Short Course for Science Teachers,"
February 8-20, 1965; "Short Training Course for English Teachers of Pri-
mary Schools," September 19, 1964. (Mimeographed.)

The following statement of the Centre Director, Mr. Moktader, makes this new outlook more expressive and clear.

> The programme of the present conference has been so designed as to provide an opportunity to the participants for equipping themselves with understanding, skills, and attitudes for increasing their professional competence needed for the accomplishment of their task.[1]

Director Moktader, commenting on the pre-planned program, observed that although the program "appears to be rigid, it admits flexibility, providing for inclusion of new topics which they may communicate to us, from time to time, during their present stay at this campus."

Director Moktader's approach, of "direct contact" with persons concerned with education in schools, practically incorporates all the advantages of "action research." It has been established truth that face to face frank discussion with active teachers is immensely helpful in assessing and understanding their problems in order to plan and organize teacher education programs suited to their needs. The present attempt of the Education Extension Centre in formulating "mutually" agreeable educational concepts deserves commendation.

Distribution of Courses

The distribution of the in-service courses is shown in Tables 39 and 40. It is obvious that the "pace" of the courses has been uneven (Table 40). The reasons for lack of balance are unknown. Some attributed this unevenness in large part to failure of "long-term planning."[2] This

---

[1]East Pakistan Education Extension Centre, "Working Paper for the Twenty-First Study Conference of Headmasters and Headmistresses of High Schools," March 1959, p. 1. (Mimeographed.)

[2]The University of Chicago Pakistan Education Project, "Report of Progress, May 23, 1958 to June 30, 1963," Chicago, Illinois, 1963, p. 21.

Table 39. Distribution of In-Service Education Programs According to
Areas of Training Given by the East Pakistan Education Extension Centre, January, 1960 to February 12, 1965

Area of Training	No. of Courses	No. of Participants
Study conference of high school heads	24	1,239
Teaching English	48	1,042
Teaching Bengali	11	157
Teaching science	25	526
Teaching mathematics	8	171
Teaching social studies	10	270
Teaching agriculture	14	227
Teaching arts & crafts	17	392
Teaching industrial arts	2	6
Teaching home economics	3	73
Conference of education officers	3	102
Conference of principals of degree colleges	1	23
Teaching religious education	1	24
Library service	1	16
Teaching music	2	22
Teaching health education	1	19
	172	4,332

Long courses

Teaching agriculture	2	31
Teaching industrial arts	1	7
Teaching commercial subjects	1	14
	4	52

Table 40. Biannual Distributions of Courses vs. Stability of the Centre: East Pakistan Education Extension Centre, January, 1960 to December, 1964

Biannual Intervals	No.of Training Courses	No. of Participants	Number of Faculty Members				
			On Active Duty	On Higher Training	On Leave	On Transfer	Joined
Jan. - June, 1960	4	111	2	--	--	--	2
July.- Dec., 1960	8	282	4	--	--	--	--
Jan. - June, 1961	35	835	5	--	1	--	1
July - Dec., 1961	9	489	7	--	2	--	2
Jan. - June, 1962	5	180	8	--	1	2	3
July - Dec., 1962	23	681	9	1	--	2	3
Jan. - June, 1963	27	617	10	--	1	2	3*
July - Dec., 1963	23	430	11	2	2	--	3
Jan. - June, 1964	18	343	10	--	2	1	1*
July - Dec., 1964	16	300	12	--	--	1	2
Total	168	4,268		3	8	8	18

*Includes returnees from higher training

may be true, since often workshops are arranged on short notice. However, the present researcher believes that this unevenness may be more due to the comparative stability or instability of the organization as a result of training, leave, transfer, and joining of personnel than to lack of "long term planning." In five years the Centre has experienced transfer of eight individuals, the joining of twenty-one new employees, and the absence for extended periods of three persons for higher training and of nine for lengthy vacations. Every time a new professional person joins the Centre he requires an orientation to the ideology of the Centre. It takes quite a while before one can get adjusted and imbued with the new spirit.

The Centre conducted most of its educational programs at Dacca on its own premises. But some of the conferences were held outside Dacca also. From January 1960 to December 1964 the Centre conducted 168 courses, conferences, workshops and training programs for 4,268 teachers, heads of schools, inspectors of schools,principals of degree colleges, health and medical officers, and other officers. In addition the Centre from time to time has arranged orientation courses for Peace Corps Volunteers, and other individuals interested in professional growth in education.

Of these programs 133 were held in Dacca, six in Comilla, five each in Chittagong, Sylhet and Jessore, four in Rangpur, three each in Mymensingh and Rajshahi, one each in Barisal, Chandpur, Daulatpur and Ishurdi. However, in 1964 the Centre tended to concentrate all its education programs in and around Dacca. This tendency does not seem to be very encouraging.

Almost all the courses have been of short duration, usually two weeks. Quite a number of workshops ran for only a week or ten days. The training program for agriculture and industrial arts teachers extended over nine months. The Centre concentrated most of its efforts on English. Not much was done in the new fields of industrial arts, commercial subjects and home economics.

Problems

The problems faced by the Education Extension Centre were many, deeply rooted and diverse. In citing these problems the writer is not in any way trying to convey a criticism of the situation. On the other hand, he is making efforts to identify the areas so that further improvement may be stimulated to take place in the future. Some of the problems are:

1. Conflict between the purpose and objectives of the Education Extension Centre, and the actual practice, or opportunity or practicability in the real school situation.

2. Absence of administrative authority or control over the schools in which it plans to bring about change. The persuasive nature of the Centre, although a very welcome sign, often betrays the original purpose due to the existing situation which necessarily conforms with current bureaucratic practice.

3. Difficulties affecting availability and employment of proper staff for the Eduaation Extension Centre. A high turnover of personnel has not made for stability within the organization.

4. Difficulties affecting availability and employment of an
   adequate number of qualified teachers for each course planned.
   The manner of recruitment of participants does not seem to
   be very effective (see Chapter IV, p. 54).

5. The low pay scale of the personnel concerned with education.
   It has been difficult to attract and retain well qualified
   personnel for the Centre because of the relatively low pay
   scale.

6. The heavy demands imposed upon the Centre regardless of the
   limitations and the inadequacies of its staff.

7. The contrast between the lack of adequate financial provisions
   for conducting in-service education program and the high ex-
   pectations of the teachers who have made the effort to attend.

8. Poor morale of the faculty due to the Centre's "temporary" or
   emergency status. Permanent institutions such as pre-service
   education institutions carry permanent status and so the
   Centre, lacking such permanent status, suffers in prestige.
   This situation has affected the Centre in various ways. Well
   qualified personnel were reluctant to join and were eager to
   leave. The promising young man was understandably unwilling
   to serve in a temporary institution and he left for greener
   pastures whenever opportunity permitted.

9. Intra-organizational rivalries, rapport among staff members,
   and horizontal and vertical communication within the adminis-
   tration are some of the problems that are yet to be solved.

10. Coordination and correlation of the personnel problem of

the Education Extension Centre with the training programs

it anticipates carrying out.

Teachers Training College Vs. Education Extension Centre

The researcher has tried to assess how the Education Extension Centre compares and correlates with the functions of the teacher training institutions. His discussions with the educational authorities have led him to conclude that some significant beliefs are widespread among them.

However, these conclusions do not necessarily represent the writers point of view on what ought to or ought not to be done. These views are held by many very important persons in East Pakistan, but not necessarily all of them are held by each one. These views need to be weighed before a decisive plan for the Education Extension Centre can be worked out.

a. The Education Extension Centre is an emergency institution and its purpose is to arrange a series of frantic, emergency convolutions of intensive catch-up training, to be discontinued presumably when someone in authority considers the emergency to be over.

b. The courses are planned on the assumption that the participants concerned already "know" the subject matter, teaching methods, and other relevant material; but it is necessary from time to time to check on what they know. It is more a matter of "probing" than imparting knowledge.

c. Long-term courses (three months or more) and courses which lead to degrees cannot be entrusted to the Education Extension Centre since this responsibility in itself would defeat the purpose of the creation of this institution.

d. The faculty of the Education Extension Centre are not qualified to be the faculty of a degree granting institution. This particular belief came largely from the personnel of the pre-service training institutions.

A comparison of the educational qualifications and experience of the personnel of the teachers training colleges at Dacca and Comilla with that at the Centre led to the researcher's belief that the Centre had far more qualified and experienced staff than these teacher training institutions.

e. The Centre should concentrate its efforts on introducing modern methods of teaching, modern curriculum, the new subjects of agriculture, home economics, commerce, arts and crafts, science, and experiments with increasing use of educational television. In other words, let the Centre be the "pioneer" of all educational thought, experiment on it in East Pakistan, and later transmit its experience to the teacher training institutions.

f. Communication between pre-service education and in-service education would be possible only if and when the traditional conservatism of pre-service education is not threatened by the efforts of the Centre. The concept basically was that pre-service education has borne its fruits, but in-service education has not. And so let the pace of change of pre-service education be "slow" and when the change takes place, let it be ripened with experience.

g. The "emergency" role of the Centre would never change

and should never change. The educational development of

a growing country never ceases to be in an "emergency."

New thoughts and ideas, new needs and problems, new con-

flicts and concerns, would be created through the concentrated

effort of time which would constantly call for fresh learning.

h. The proposed elevation of the Education Extension Centre to an

educational staff college where all the people concerned with

education would be brought in to bridge the gap between ad-

ministration and the educational process is a welcome sign.

All teachers and administrators should be brought in for

"short, quite effective intensive training"[1] to get a long-

range view of what education can do in a developing economy.

This specific role cannot be performed by the existing teacher

training institutions.

As long as these contradictory viewpoints are held by important

educational authorities of East Pakistan, the optimal function of the

Centre will continue to be below its great potential.

Cooperation of Cooperating Agencies

The cooperation and involvement of various institutions in provid-

ing in-service education programs for teachers through the coordination

of the Education Extension Centre seem to be an encouraging reality. The

responses of the thirty-six institutions who returned the questionnaire[2]

---

[1] A.S. Khan Chowdhury, in a tape recorded discussion session with
the researcher. February 1965.

[2] See Instrument No. 3, Appendix.

sent to them indicate that the majority of them, twenty-eight institutions are willing and in a position to do the following:

1. Cooperate with the East Pakistan Education Extension Centre in providing and conducting in-service training programs for teachers.

2. Offer refresher or advanced courses specially for teachers who express the need for these courses.

3. Initiate a follow-up program consisting of on-the-job visits and conferences for teacher-trainees in their institutions (who have been trained or would be trained in their institution under cooperation of Education Extension Centre) in order to help them adjust to and become more effective in their teaching jobs.

4. Organize off-campus classes on specific courses at some schools during summer vacation periods.

5. Arrange and make it possible for teachers visiting their institutions to confer with members of their faculty, listen to lectures, and observe the latest techniques and procedures used by their institutions in their programs.

6. Make available to teachers publications of institutions pertaining to teaching and other aspects of education for their professional information.

7. Participate in conferences, conventions or workshops on the various problems of education in the country.

8. Sponsor workshops, seminars, and conferences for teachers.

9. Seek the suggestions or recommendations of Education Extension Centre officials and school administrators regarding teacher education curricula.

In addition, twenty-two of the responding institutions are willing to be hosts to participant teachers at workshops and conferences for the duration of these activities. Eighteen are willing to offer summer school scholarships consisting of free tuition to a limited number of outstanding teachers. Ten will provide funds for the travelling expenses of members of their education faculty who may be invited by the East Pakistan Education Extension Centre and authorized by their institution to serve in workshops, seminars or conferences of secondary school teachers.

Surprisingly, none of the five teacher training colleges responded to the questionnaire. Despite the lack of enthusiasm of the pre-service education institutions, the cooperation of other institutions suggests optimism and a significant leadership role for the Centre.

CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

A significant wealth of information resulted from the responses to the instruments B and C, the researcher's personal visits, his constant interaction and communication with the respondent groups, and impressions that originate from a detached position. At times it was a difficult task to confine his attention only to data relevant to the purpose of the study. More often it was difficult to justify an impression, an idea, or a thought which seemed significant for the study but could not be conclusively demonstrated due to the absence of tangible data.

This chapter presents significant and relevant findings both from tangible data and from observations and impressions, in the form of summary, conclusions and recommendations.

The present study made an effort to determine:

1. A set of criteria for in-service teacher education in East Pakistan.

2. In-service education needs of teachers and administrators of East Pakistan secondary schools as perceived in present day educational thought.

3. In-service education needs of teachers as perceived by teachers.

4. In-service education needs of administrators as perceived by administrators.

5. In-service education needs of teachers as perceived by administrators.

6. In-service education needs of administrators as perceived by teachers.

7. The factors which prevent and tend to limit the opportunities and participation of teachers and administrators in in-service education activities.

8. The role of teachers and the activities that may be included in the teacher's program.

9. The job satisfactions and reactions of teachers and administrators as members of the teaching profession.

10. The disagreements or differences between the administrators and teachers in their perceptions of all in-service education activities.

11. The views of the consultants on specific in-service education needs regarding which administrators and teachers significantly differed.

12. The uniformity or lack of uniformity (consensus or lack of consensus) in the degree of need perceived by members of a professional group such as teachers and administrators.

13. A set of standards for salary increases or promotions in East Pakistan schools.

14. Aims and objectives of the East Pakistan Education Extension Centre and the extent and scope of its activities in terms of the objectives.

15. A pattern of activities and responsibilities for the
East Pakistan Education Extension Centre towards meeting
the discovered needs.

Procedure

The basic data used in this study were collected from 222 second-
ary school teachers, forty-five secondary school administrators, educa-
tional staff and line administrators and thirteen consultants directly
or indirectly connected with the in-service education of secondary
school teachers in East Pakistan. The process of collecting data was
accomplished primarily by three different instruments, suited for dif-
ferent purposes. In addition, personal depth interviews,some of which
were tape recorded, were used to go more deeply into certain areas
of crucial need where detailed information or clarification was a
necessity. Also data were gathered while attending a faculty meeting
at the East Pakistan Education Extension Centre and by visiting the
schools and participating in workshops. Educational documents, records,
literature, course outlines, syllabi of in-service education in various
subjects, and individual reports of participants were systematically
analyzed. The data collected were analyzed mentally, manually and by
CD 3600 computer at Michigan State University. The tangible data were
mostly analyzed through "analysis of the contingency tables (Act 11)"
and "single column frequency distributions" methods.

Summary of Findings from Tangible Data

1. The administrators were consistently more advanced and mature in age, experience and in education than the teachers of East Pakistan.

2. The majority of the teachers and administrators have a rural orientation in their formal education, although their preference for teaching positions appears to be in urban situations.

3. The administrators rated their need and the need of the teachers for in-service education consistently higher than the teachers in most of the need items.

4. The differences between the administrators and teachers on the relative "degree of need" of different items were statistically insignificant in most cases.

5. The consultants tended to have greater affinity with the administrators in their perception of those need items which were statistically significant.

6. The administrators had greater uniformity (consensus) than the teachers in their responses indicating the degree of need.

7. The teachers tended to have a wider range of responses on individual items than the administrators within a need area.

8. The teachers expressed great need for themselves in the areas of Library Facilities (2.94), Sources of Teaching Materials (2.76), Curriculum (2.66) and Research and Experimentation (2.60).

9. The administrators expressed great need for the teachers in the areas of Library Facilities (3.26), Curriculum (3.14) and Principles of Learning (3.09).

10. The teachers expressed top need for administrators in the
    areas, Curriculum (2.43) and Personality as an Adminis-
    trator (2.41). The administrators agreed with the teachers,
    but scored higher than the teachers, 3.02 and 2.96 respectively.

11. The administrators and teachers showed awareness of the
    isolation of the school from the community which is typical
    in East Pakistan.

12. The administrators showed a tendency to keep teachers from
    learning about such activities and individual needs as
    traditionally are included within the sphere of administrative
    activity.

13. The administrators were more interested for teachers to learn
    the "programs of manual work" than were the teachers.

14. Both administrators and teachers placed more emphasis on the
    importance of increasing the ability to speak English than
    to write or read it.

15. All the teachers indicated that they have used at least one
    source of educational help during their entire teaching career.
    But most of the teachers have used a wide range of sources
    of educational help. The most commonly used educational help
    came from the other "teachers in their school" followed by
    the "headmaster," "assistant headmaster," and "specialists"
    from East Pakistan Education Extension Centre.

16. The teachers who did not use the help perceived the degree
    of need for such help consistently much lower than the teachers
    who used the help.

17. The correlation between ranking of the "degree of need" for different sources of educational help and the ranking based on the extent of use showed there was no relationship between reported use and perception of need.

18. The perception by teachers of their own need for educational help was consistently higher than that of administrators regarding teachers' needs.

19. The first eight choices of "sources of educational help" for teachers by teachers and administrators (not in the order of importance) were: (a) headmaster, (b) specialist from Education Extension Centre, (c) foreign specialists and advisors, (d) journalists, newspapermen or radio broadcasters, (e) teachers in their schools, (f) professors from local colleges, (g) assistant headmaster, and (h) inspector of schools.

20. All the teachers indicated individually that they have experienced at least one type of classroom visitor during the year 1964, but most of them reported a wide range of classroom visitors. The most common visitors were "headmaster," "assistant headmaster," "inspector of schools" and "specialists from Education Extension Centre."

21. Most of the experienced teachers expressed favorable attitudes toward classroom visitors.

22. Teachers who had not experienced a classroom visitor perceived the need for such visitations consistently much lower than teachers who had experienced a visitor.

23. The first four choices of classroom visitors for teachers by both teachers and administrators (not necessarily in that order) were: (a) headmaster, (b) instructor from teachers training college, (c) specialist from Education Extension Centre, and (d) inspector of schools.

24. The low correlation between ranking of the "degree of need" for various classroom visitors and ranking based on the extent of visitation showed there was no relationship between frequency of visitation and perception of need.

25. All teachers indicated individually that at least one type of community resource was available for use in the school. But most of the teachers had a wide range of community educational resources available for their use. The most commonly available community educational resources were: health officials, public library, United States Information Service, and social workers.

26. The correlation between ranking of the degree of need for various community educational resources and ranking based on extent of availability, showed that there was no relationship between the incidence of availability and perception of need.

27. Seventy percent of the teachers who indicated the availability of a resource also denoted their favorable attitude toward the use of that resource.

28. The first three choices of resources by both administrators and teachers were: (a) public library, (b) health officials, and (c) Pakistan Information Service.

29. All teachers indicated individually that they have partici-
pated in at least one in-service education activity within
the last three years. However, many teachers participated in
a wide range of in-service education activities. The most
common in-service education activities participated in were:
(a) individual study, (b) workshop at Education Extension
Centre, (c) opportunity to observe others demonstrate teach-
ing, (d) East Pakistan Education Week, and (e) teachers' con-
ventions or conferences.

30. Over 70 percent of the teachers who participated in an in-
service education activity also reported favorable attitudes
toward that activity.

31. The first six choices for in-service education activities by
both participating teachers and administrators were: (a)
organized educational trip, (b) short training courses by
others, (c) intervisitation of schools, (d) workshop by Ed-
ucation Extension Centre, (e) faculty meetings directed to
professional improvement and (f) students' conventions.

32. Administrators' ability to work with teachers was given more
importance by the teachers than by the administrators them-
selves.

33. Both administrators and teachers gave top preference for the
administrators' leadership role in planning, executing and
evaluating new programs.

34. Teachers and administrators agreed that administrators have
in-service education needs for supervision and management
of courses in: (a) science group, (b) agriculture group,

(c) industrial arts group, (d) new ideas in examination methods, (e) school development program, (f) organization of school library, and (g) organization of program for manual work.

35. Both administrators and teachers felt that the schools in East Pakistan should have: (a) books that are more useful for students, (b) books of better quality, and (c) recently published books.

36. Administrators and teachers both identified seven roles that a teacher should perform in East Pakistan's schools.

37. The following are the most important limiting factors agreed to by both administrators and teachers as affecting attendance of in-service education programs for teachers; (a) limited government daily allowance while in training, (b) non-payment of expenses immediately after the workshop, (c) limited government travel grant and (d) family responsibilities.

38. Receiving of training in Teachers Training College, seniority, and good teaching were the three criteria on which promotions and salary increases were reported to be decided in most East Pakistani schools.

39. Teachers and administrators of secondary schools in East Pakistan appeared to be as well satisfied with their jobs as the workers in the United States, who had been studied by Hoppock.

40. The East Pakistan Education Extension Centre had enlarged its responsibilities beyond those envisioned in the original plan.

41. The objectives of in-service education to be performed through workshops and other media have undergone a transformation as the Centre has gained experience.

42. The lack of balance in the biannual distribution of courses in various subject matters seems probably due more to the instability of the organization than to inadequacies in long term planning. However, the data suggest this issue is still debatable.

43. The Centre has made educational progress in spite of many obstacles stemming from ideological conflicts, organizational rivalries, and competition.

44. A number of diverse and conflicting but significant general beliefs are widespread among the educational authorities regarding the functions of the Education Extension Centre and Teachers Training Colleges.

45. A large majority of the institutions concerned with teacher education programs, either in-service or pre-service, offered to cooperate with and provide help to the East Pakistan Education Extension Centre.

46. Teachers Training Colleges, however, seemed to be reluctant to cooperate since they failed to respond to the questionnaire sent to them.

Conclusions

1. The degree of need expressed by the different professional
   groups does not necessarily represent any deficiency or in-
   adequacy on the part of respondents in those groups.

2. On the contrary, the degree of need expressed more often
   represented the urge for further learning regarding in-
   dividual items by the respondents.

3. Experience, emotional involvement in an activity, and posses-
   sion of the urge for further learning may have direct inter-
   relationships. Experiencing various aspects of learning
   probably leads to liking which, in turn, reflects an urge for
   further learning. Their preconceived ideas regarding any
   activity that they have not experienced may lead them to ex-
   press conservatively their feeling of need for that activity.
   If the degree of need perceived actually expressed deficiency
   or inadequacy, then the inexperienced teachers' ratings should
   have been higher than those of experienced teachers. But it
   was not so. The data also showed participation in a program
   to be positively associated with liking of that program.

4. Any or all in-service education activity, if arranged at a
   convenient time for a suitable group with appropriate pro-
   cedures, would probably be appreciated by its participants
   and would help to assure the desirable and sought-for outcome.
   Further research may disclose what constitutes appropriate-
   ness of time, group and procedure.

5. Among the individuals reached in the course of this study almost everyone concerned with secondary education in East Pakistan recognized the need for in-service education and was willing to participate and extend this cooperation to further such activities whenever needed.

6. Educational administrators' perception of their needs and of teachers' needs for in-service education were consistently higher than were those of teachers. The administrators were more mature and experienced. Possibly experience has contributed significantly to their stronger urge for additional growth and learning. Further research may throw light on the reasons for this differential.

7. Educational administrators were more consistent than the teachers in their thoughts and perceptions regarding in-service education needs. These administrators in East Pakistan can correctly be considered a comparatively homogeneous entity in this respect.

8. Since teachers more often lacked uniformity or consensus regarding perceptions of in-service education needs consequently appropriate in-service education activities should be arranged for suitable sub-groups of teachers who are more homogeneous in their educational experience, and outlook.

9. Generally speaking, the differences in thought and perception between administrators and teachers were not significant enough to cause practical problems. In most of the in-service education needs they were in agreement, often very closely. However, they did differ widely in their thinking regarding

some areas of need. Accordingly from a practical point of view

it may be preferable to defer, at least temporarily, efforts

to provide in-service education programs in such need areas.

10. Teachers recognized their own need for continued professional

growth and the right of the community to expect them to partici-

pate in activities contributing to such growth.

11. In spite of the teachers' expressed wishes for regular attend-

ance at in-service education activities, certain factors in-

volving duration of courses, travel grants, and daily allowances

limited their attendance at such activities.

12. Most of the in-service education activities liked by the teachers

could be made available to teachers in their own schools,

homes and communities.

13. Teachers recognized their participation in in-service educa-

tion activities is not merely a polite compliance with an

administrative invitation but a professional necessity.

14. School libraries in East Pakistan are in a deplorable condition.

Concentrated efforts need to be made to improve the situation.

Both teachers and administrators have real and equal concern

for the improvement of school libraries.

15. The recorded objectives for various workshops of the East

Pakistan Education Extension Centre, which usually indicate

the content of the workshops, when compared with the data ob-

tained in the present study, suggest that the Education Exten-

sion Centre is not meeting the perceived essential needs of

the teachers. Similarly, subject matter courses offered by

the Centre do not correspond with teachers' and administrators'

preferences.

16. All organized activities of in-service education for public secondary school teachers in the Province should be coordinated, and the Education Extension Centre is in the best position to provide such coordination.

17. Teachers and administrators have expressed their faith in the activities of the East Pakistan Education Extension Centre and of the teachers training colleges. However, at the time the present study was made there was serious lack of communication between these two types of institutions. In general, respondents in this study apparently were not aware of the differences between the two types of organizations. The respondents' unawareness of actual inter-organizational rivalry combined with their trust and confidence in both agencies offers a tremendous potentiality for bridging the existing undesirable gap between in-service and pre-service education.

18. Both administrators and teachers are satisfied with their profession. However, this satisfaction could advantageously be maximized by means of further incentives, both monetary and non-economic.

19. Ten criteria were identified in this study as guidelines for developing the instruments, the questionnaire, and the procedures for personal depth interviews and observations. The criteria served their purpose satisfactorily.

20. Personal collection of the data, as had been anticipated, proved to be very useful.

21. However, the amount of time available for collection of
data was not quite sufficient for the volume of work pro-
jected. Ideally, it would seem, the researcher should
anticipate all probable if not possible hazards to be met
in the course of his field work. So far as possible he
should be prepared with alternative plans of action if and
when such obstacles materialize. Flexibility, within
limits, is necessary so that the researcher may appropriately
modify his field operations.

22. The response indicate that teachers being educated today--no
matter whether a product of the teachers training college or
a degree granting academic institution--are being prepared
to serve in an obsolete role and to teach in an obsolete way.
This conclusion is not meant as a criticism of, or to cast
blame upon, the teacher preparation institutions themselves.
The problem is inherent in the imbalance that obtains today
in the total complex of human society characterized by change
rather than stability. The academic climate is oriented to
the past rather than to the future, while the social climate
is oriented to achievement of a future which is new.

23. On the basis of the relevant data presented in this study,
the basic hypothesis of the present study is rejected.

Recommendations

Introduction

Preeminent among the many problems with which teacher education

in East Pakistan is fraught today is in its inability to furnish guiding

principles for its own systematic improvement.

> The question of what knowledge is relevant to the teaching be-
> havior is an empirical one, because teaching is a natural social
> phenomenon. It has its own forms, its own constituent elements,
> its own regularities, and its own problems. It takes place
> under a stable set of conditions--time, limits, authority figures,
> systems of knowledge, social structures, psychological capacities,
> etc.[1]

In other words, if we would understand teaching and thereby gain control

over it, then only would it be justified for us to suggest a continuing

flow of new knowledge pertinent to in-service education of secondary

school teachers of East Pakistan.

In spite of increasing criticism of East Pakistan's procedures for

the education of its teachers, there has been remarkably little basic

research relating to the education of teachers during the past.

The dilemma facing Pakistani educators and consultants who are

concerned with the preparation of the teachers is whether to try to

improve teacher education before understanding it better, or to under-

stand it better before trying to improve it.

---

[1]B.O. Smith, "Knowledge about Knowledge for Teachers," University
of Illinois, 1961, p. 2 (mimeographed), cited by Frederick R. Cyphert
and Ernest Spaights, "Analysis and Projection of Research in Teacher
Education," The Ohio State University Research Foundation, Columbus, Ohio.

This situation has often led to critical generalizations about "educationism" in East Pakistan. Knowledgable educators could only retort with instances that challenge such criticism, but could not offer a potentially valid counter generalization.

The present investigation does not cover all aspects of teacher education discussed above. No single study could do this adequately and the researcher is unwilling to make generalizations which go beyong the scope of his own research.

Nevertheless the writer feels professionally obligated to offer, in all humility and with all due caution, some recommendations which are interrelated and somewhat dependent on other areas of teacher education. Any such related recommendation which reaches beyond the present research area itself should be considered with care and accepted only with caution. With these limitations in mind, the researcher would venture to offer the following recommendations which are based largely but not exclusively on his data and field experience.

Criteria for In-Service Education

The proposed ten criteria for in-service education were used in this study as a guideline for developing the instruments, the questionnaires, procedures for personal depth interviews and observations. The data collected strongly suggest that the proposed ten criteria have served their purpose successfully. Hence it is recommended that the criteria be adopted as the postulates on which to base a program of in-service education for the secondary school teachers of East Pakistan.

1. Participation in in-service education is a regular part of the school program.

2. The program includes both long range and immediate continuous activities.

3. People work on problems that are significant to them and plan how they will proceed.

4. Multiple and rich resources are made available and are used.

5. An atmosphere conducive to the testing, trial, and utilization of creative ideas and plans in practical situations is maintained.

6. Activities are related to the pertinent aspects of the current educational, cultural, political and economic scene.

7. To move from decisions to actions, the simplest possible means, are developed.

8. An atmosphere conducive to building mutual respect, support, permissiveness, and creativeness is established.

9. To achieve complementary in-service education activities, continuous attention is given to the interrelationship of different groups.

10. Appraisal is made an integral part of in-service activities.

Philosophy of In-Service Education

Every educational institution concerned with in-service education of educators should have a written philosophy of in-service education. The objectives, purposes and goals outlined should be subject to modifications so that they will be responsive to new trends

in education, and to new demands for in-service education in profes-
sional skills and new knowledge. The following are proposed for pos-
sible adoption as the initial objectives for in-service education:

1. In-service education provides continuity in the educational
   growth of professional school personnel.

2. In-service education plans and provides opportunitites for
   professional growth.

3. In-service education promotes and enhances the personal
   welfare of teaching personnel.

4. In-service education provides for the continuous improve-
   ment of instruction.

5. In-service education promotes wider, better and closer
   public and community relations.

6. In-service education provides for more effective adminis-
   tration and supervision of schools.

7. In-service education provides for a systematic and continuous
   program of evaluation.

Role of the Teacher

The following role and activities of the teacher may be con-
sidered and possibly accepted for inclusion in the teacher's program.

1. Teach high school students.

2. Guide and advise students on their personal and instructional
   problems.

3. Continue to work on his own further education.

4. Serve on curriculum and other committees for the improve-
   ment of the school program.

5. Serve as an educational leader of the community.

6. Participate in both group and individual conferences with

    guardians.

7. Visit homes of students.

Governing Principles for Teachers, Administrators and School System

The planning and policies of the educational system are currently

centralized in the hands of the school administrators in East Pakistan.

A balanced decentralization of power, a more democratic determination

of fundamental policies by both teachers and administrators, and maximum

freedom within the framework of the educational policy for all individuals

would be conducive to the effective growth of the school system and the

individual. But in order to enjoy these specific purposes each individual

within the system needs to conduct himself in a professional and ethical

manner. The researcher wishes to suggest the following formulation of

principles for teachers, administrators and the school system for possible

acceptance.

Teachers

The teacher to grow personally and professionally may aspire to

cultivate the following qualities within himself:

1. A strong desire to grow.

2. A readiness to share with others--in activities, enterprises,

    and responsibilities.

3. A sensitivity to the opinion of others.

4. Intelligence, enlightenment and familiarity with education.

5. An intention to abandon unproductive practices and principles

    of teaching.

6. A determination to be a 'pioneer,' --accept challenges for

   desirable innovation and change even though they require

   extra effort and their outcomes are uncertain.

Administrators

The administrator may aspire to cultivate the following character-
istics within himself:

1. An awareness and acceptance of his responsibility to devote

   the necessary time and energy to learn as much as possible

   about the teachers and other individuals with whom he will

   be working.

2. A supportive and cooperative attitude which facilitates

   the orientation of the teacher to all facets of the teach-

   ing experience, establishes a team relationship, and gradually

   develops the novice into a responsible, professional, adult

   teacher.

3. A determination to plan together the responsibilities of

   his teachers on the basis of talents, abilities, needs and

   interests, so that each teacher is willing and likely to

   perform his individual responsibilities to the best of his

   ability.

4. Leadership in implementing a policy that places high value

   on research and experimentation, creative effort and innova-

   tion, and group study in the school.

5. A willingness to help the teacher in self-evaluation, to

   guide continually toward greater professional and personal

   growth, and to assist the interested teacher prepare him-

   self for his future administrative position.

School Philosophy

All individuals within the school may cultivate the following characteristics:

1. An intention to admit error with a desire to learn to be right.

2. Emphasis on more use of horizontal rather than vertical channels of communication.

3. Contribution to an atmosphere of freedom to learn and to teach.

4. A determination to achieve self and school improvement.

5. An honest recognition of the integrity and worth of each individual in the school, regardless of his status and power.

In-Service Education Needs

The teachers and administrators have expressed a wide number of in-service educational needs for the improvement of their professional growth. The present facilities of in-service education, the resources opportunities prevalent, and the educational background of the clients do not permit the fulfillment of all needs at the same time. The needs can be classified into those requiring immediate, short term and long term action, and plans may be made accordingly.

The researcher is suggesting the following identification of immediate, short term and long term needs for teachers and administrators, and recommending their acceptance in that order in the in-service teacher education program.

Immediate Needs

Teacher.--The teachers have immediate need in the areas of "curriculum," "sources of teaching materials" and "human growth and development." It is recommended that all the sub-items in these need areas be included in a teacher education program immediately.

In addition to the above three areas, the teachers have immediate needs in the following areas, and these topics should also be included in the in-service teacher education program:

1. Preparation and use in class of audio visual materials.

2. Arousal of more interest in the subject.

3. Presentation of better demonstrations.

4. Greater use of discussion and less use of lecturing method of teaching.

5. Making certain that the students understand the teacher.

6. Teaching students to think independently and to understand.

7. Enhancing teacher's ability to improve home, school and community living.

8. Introduce new ideas in education.

9. Current world affairs.

10. New books in education.

11. Efficient methods of school library use.

12. Current literature.

13. Philosophy of education.

14. Current national affairs.

15. Increase teacher's ability to speak English.

16. Teacher guidance of learning activities.

17. Teacher's role as a teacher within classroom.

18. Leadership (how teachers may become leaders).

19. Organization of meetings for guardians, teachers and administrators.

20. Organization of student publications.

21. Organization of manual work in schools.

Administrators.--The administrators have immediate needs in the areas "personality as an administrator" and "curriculum."

The administrators, in addition to the above two need areas, have immediate needs for help in the following topics:

1. Management and supervision of courses in science group.

2. Management and supervision of courses in industrial arts group.

3. Management and supervision of courses in agriculture group.

4. Management and supervision of courses in humanities group.

5. School development programs.

6. New ideas in examination methods.

7. Guidance and counseling.

8. Organization of school library.

9. Organization of programs for manual work.

10. Organization of "students week," "education week," "science fair," etc.

Short Term Needs

Teacher.--The teachers have short term needs in the need areas:
(a) personality as a teacher, (b) student organizations and activities,
(c) general education, (d) methods of teaching, and (e)research and ex-
perimentation. All items in these need areas should be included in the
short term program.

Administrator.--The administrators have short term needs in the
area "management and supervision of different group courses." All
items in this need area should be included in the short term program.

Long Term Needs

Teacher .--The teachers have long term needs in the following
areas: (a) principles of learning, (b) administration and supervision,
and (c) co-curriculum activities. All items in these areas should be
included in the long term program.

Administrator.--The administrators have long term needs in these
areas: (a) student organization and activities and (b) administration
and supervision. All items in these areas should be included in the
long term program.

Sources of Educational Help

Immediate sources.--The immediate sources for educational help
to the teachers should be:

1. Other teachers in their own school.

2. Headmaster of their school.

3. Specialists from East Pakistan Education Extension Centre.

4. Journalists, newspapermen, and radio braodcasters.

All efforts should be made to encourage their participation and cooper-
ation in the school program and their willingness to help the teacher.

Secondary sources.--The secondary sources of help for the
teachers should be:

1. Their former professors.

2. Professors from local colleges.

3. Assistant headmaster.

4. Secretary of the school.

5. Inspector of schools.

6. Agricultural officer.

Classroom Visitations

Educational growth of the professional staff is greater when
democratic principles are understood and used. This being the case,
classroom visitors should not continue to "instruct" and "inspect"
the teachers, but should establish a cooperative relationship in their
attempts to solve the teacher's problems. The researcher believes that
the "headmaster of the school," "specialists from Education Extension
Centre" and "instructors from Teacher Training Colleges" are in better
positions to achieve these objectives than the other suggested visitors.
Classroom visitation for the prime purpose of the professional improve-
ment of the teachers may be confined to the three groups specified.
The "Inspector of schools," and "foreign advisors and specialists"
should continue their visits only if and when they can establish a good
rapport with the teacher concerned.

Community Educational Resources

All educators were concerned with the great and growing isola-
tion of the school from its community. Use of various community educa-
tional resources in the classroom by the teachers would certainly help

create an atmosphere conducive to ending this undesirable isolation.
The following community educational resources may be used widely in
the schools. A desire to use these resources in the schools already
exists.

1. Health officials.

2. Social workers.

3. Pakistan Information Service.

4. Public libraries.

5. Agricultural Extension Service (for rural schools).

6. Agricultural Information Service (for rural schools).

However, if the school is in a position to use further com-
munity educational resources, then its efforts may be concentrated on:

1. Industrial, business and cooperative concerns.

2. United States Information Service.

3. British Information Service.

In-Service Educational Activities

A number of in-service educational activities have proven to
be successful for the in-service growth of educational personnel. The
effectiveness of each activity is entirely dependent on time, resources,
facilities, educational background, psychological motivation, and many
other factors. Some are observable, some could be measured quantitat-
ively and many others cannot be measured even qualitatively. The re-
searcher believes that the following in-service education activities
may prove effective and may be accepted for immediate implementation:

1. Workshops run by the East Pakistan Education Extension Centre.

2. Short training courses run by other competent and qualified teacher education agencies.

3. Organized educational trips.

4. Student conventions.

5. Intervisitation between schools.

6. Opportunity to observe others demonstrate teaching.

7. Teachers' conventions or conferences.

8. Faculty meetings directed to professional improvement.

9. Individual study.

10. East Pakistan Education Week.

11. Guest speakers.

12. School committee on professional improvement matters.

Other in-service education activities may be continued if their effectiveness is assured.

School Libraries

School libraries in East Pakistan are in a pathetic and deplorable condition. At the same time, a hunger exists within the teachers for further learning through school libraries. The school libraries in East Pakistan should have:

1. Larger numbers of books.

2. Books of better quality.

3. Books of recent publication.

4. Books that are more useful for students.

5. Trained librarians.

Encouragement for Participation

In order to encourage teachers to participate in in-service education activities, and to eliminate the limitations upon their attendance, the following steps should be taken:

1. The daily allowance given to the participants while in training should be increased to adequately compensate for their needs.

2. The travel grants should also be increased so that more teachers may attend the activities.

3. The travel and daily allowances admissible to the participants should be paid to the participants immediately after the workshop prior to their leaving for their school.

4. The teacher's workload should be flexible enough to permit him to attend regularly in-service education activities in a pre-planned fashion.

5. Substitute teachers should take care of classes whenever a teacher is on duty at an in-service education activity.

6. School management shall provide for leaves of absences with salary for the duration of time the teacher is in residence at an institution designed to increase the teacher's competence. Government funds should be provided to meet the teacher's expenses during his presence at the institution.

Salary and Promotion

The salary increase or promotion in East Pakistani schools should be based upon: (a) successful exposure to training at a Teachers Training College, (b) evidence of good teaching, (c) seniority, (d) successful

exposure to training at the East Pakistan Education Extension Centre and (e) promise and merit.

The mere increase of age without respect to its bearing on the teacher's actual work should not be given much importance.

School management and the government, jointly, should provide financial assistance so that teachers may attend various in-service programs more frequently.

Salary schedules should have provisions for rewarding meritorious teachers with salary increments that go beyond those conferred on the basis of simple seniority.

Successful participation in a course of long duration should qualify a teacher for a salary increase.

East Pakistan Education Extension Centre

The East Pakistan Education Extension Centre should be central to the in-service education of teachers. The communications and understanding gap between the producer and the applier of knowledge in education is rapidly increasing. It should be the function of the Centre to narrow this distance. The principles which should govern the future functioning of the East Pakistan Education Extension Centre, as perceived by the writer in light of his research experience, may be stated as follows:

1. The activities of the Education Extension Centre should be as varied as the interests of teaching people, professionally as broad as the whole of education, and geographically as extensive as the confines of the nation. Let it look upon itself as a pioneer. A pioneer is one who is in the forefront in the march of civilization.

2. The Education Extension Centre should have the freedom and flexibility that will permit it to adjust itself continually to the needs of those it serves.

3. The Centre should focus its attention on all legitimate human educational activities that are worthy for continuing education.

4. The Education Extension Centre should not be parochial in its interests and outlook if it expects to serve the needs of society. The Centre should cultivate a sympathetic interest in the well-being of its teachers and educators and be true to the great humane traditions.

5. The Education Extension Centre is now in the process of attempting to merit and acquire the confidence and trust of those it serves. Once those goals are achieved, it should become the obligation of all the faculty and the administration to make certain that the Centre does not betray that confidence and trust.

The East Pakistan Education Extension Centre, being the primary agency for in-service education in East Pakistan, may incorporate into its acknowledged responsibilities most of the recommendations suggested in this study for effective implementation.

As the major centralized agency for in-service education the Centre may perform the following jobs:

1. Cooperate with other teacher education institutions in providing and conducting in-service training programs for teachers.

2. Organize off-campus classes on specific courses on the campuses of some schools during summer or other vacation periods.

3. Arrange and make it possible for teachers visiting these institutions to confer with members of their faculties, listen to lectures, or observe the latest techniques and procedures used by these institutions in their programs.

4. Invite their faculty members to participate in conferences, conventions and workshops arranged by the Centre.

5. Seek suggestions and recommendations from them regarding various aspects of teacher education.

6. Make systematic, sustained and explicit efforts to bridge the distance between pre-service and in-service teacher education institutions.

The East Pakistan Education Extension Centre, the teacher training colleges, or some equivalent agency, should cooperatively devise a degree granting summer vacation program for increasing the competence of the teachers as teachers. It should be open to any graduate teacher.

The proposed summer school session should be arranged in such a way that four summer residences of ninety days would complete the degree requirements.

If the offering in different subject areas is not wide enough to provide meaningful work in the summer session, arrangement should be made for the return of the concerned teachers to attend such a course during normal academic year.

The proposed ninety day sessions, if successful, should be offered throughout the entire year to enable more teachers to attend such programs.

For undergraduate teachers, a continuous program of "practicum" which would lead in six years to a Bachelor of Education degree should be arranged. The courses should be of three-month duration and continue all the year around. The courses taken should maintain a balance between the subject matter the teacher is planning to teach and the methods and psychology of education.

A teacher should be encouraged to attend a workshop in his major subject area once every three years and successful participation should be recognized by an appropriate salary increase. He should also be encouraged to attend other types of in-service programs.

The well educated teacher of the future will need to be primarily a self-educated man. Attainment of this end will usually require a strong desire to learn and years and years of individual study. The Education Extension Centre may help to stimulate, sustain, and gratify this desire among teachers.

Recommendations for Future Studies

The most informative research on teacher education should be concerned with coordinating some aspects of teacher training with some aspects of teaching performance.

Future research on teacher education may well be concerned primarily with the four following questions:

1. What are the present practices for teacher education? The studies may attempt to find out what objectives shape the direction of training programs, together with the content and its placement in the programs. The studies may also report on administrative practices, the kinds of preparation given to junior high school and other types of teachers, and duplication of courses.

2. What elements of personality are associated with different kinds of teaching behavior? The studies may be concerned with the relation of personality variables to certain teaching behaviors and to verbally expressed attitudes; with the effects of anxiety upon teaching behavior, the relation between self-concept and teaching attitudes, and between social backgrounds of teachers and their attitudes toward students.

3. What aspects of training and experience are associated with different kinds of teaching behavior or criteria of teaching success? The studies may determine criteria by which to select students for teacher training programs and to provide information as to the effects of certain aspects of training and experience.'

4. What are the comparative effects of different ways of training teachers and other educational personnel? The studies may be concerned with the comparative effects of various methods for training teachers--technological media vs. field trips, and observational procedures and techniques; integrated vs. conventional courses; problem method vs. lecture or

discussion method. The inquiries may be designed to seek out whether one way of dealing with content and students has a greater or lesser effect than another way.

Essentially, these four questions may be more simply restated as follows:

1. What is valid content for teacher education?

2. What should be the organization and placement of this knowledge?

3. What are the most effective ways of teaching this content?

4. What are ways of evaluating programs thus derived?

While efforts may be directed toward Questions 2, 3 and 4, it is obvious that Question 1 should receive major initial attention.

BIBLIOGRAPHY

BIBLIOGRAPHY

Books

American Association for School Administrators. Inservice Education
    for School Administration. Washington, D.C., 1963.

American Council on Education. Teacher for Our Times. Washington,
    D.C., 1944.

Barr, A.S., William H. Burton and Leo J. Brueckner. Supervision.
    New York: D. Appleton Century Company, 1938.

Beggs, Walter J. The Education of Teachers. New York: The Center for
    Applied Research in Education, 1965.

Beck, HubartP. Men Who Control Our Universities. New York: Kings
    Crown Press, 1947.

Benjamin, Harold (ed.), Democracy in the Administration of Higher
    Education. New York: Harper and Brothers, 1950.

Brumbaugh, Aaron J. Problems of College Administration. Nashville
    Methodist Church National Board of Education, 1956.

Brunner and Sanders. Farmers of the World. New York: Columbia Univer-
    sity Press, 1955.

Cardozier, V. R. Inservice Education of Teachers of Vocational
    Agriculture. Washington: U.S. Department of Health, Education
    and Welfare, 1959.

Chambers, M. M. The Campus and the People: Organization, Support and
    Control of Higher Education in the United States in the Nineteen
    Sixties. Danville: The Inter State Printers and Publishers,
    Inc., 1960.

Conant, James B. The Education of American Teachers. New York: McGraw-
    Hill Book Company, Inc., 1963.

Dickhoff, John S. Tomorrow's Professors. New York: Fund for the Ad-
    vancement of Education, 1959.

Deutch, Monroe E. The College from Within. Berkley, California: University of California Press, 1952.

Flexner, Abraham. I Remember. New York: Simon and Schuster, 1940.

Hardin, M. Charles. Freedom in Agricultural Education. Chicago: University of Chicago Press, 1955.

Henry, Nelson B. (ed.) Inservice Education. The Fifty-sixth Yearbook of the National Society for the Study of Education. Chicago, Illinois: The University of Chicago Press, 1957.

Hoppock, Robert. Job Satisfaction. New York: Harper Brothers, 1935.

Imayetullah (ed.). Bureaucracy and Development in Pakistan. Peshawar: Pakistan Academy for Rural Development, 1963.

Khan and Aziz (ed.). The Proceedings of the Inservice Education Course for Lecturers of Intermediate Classes. Lahore: Central Training College, 1958.

Knoblauch, Law, and Meyer. State Agricultural Experiment Stations. Washington: U.S. Department of Agriculture, 1962.

Mackenzie, Gordon N., and Stephen N. Corey. Instructional Leadership. New York: Bureau of Publications. Teachers College, Columbia University, 1954.
McClelland, David C. The Achieving Society. Princetown, N.J.: D. VanNostrand Company, Inc., 1961.

Millet, John D. The Academic Community. New York: McGraw-Hill Book Company, Inc., 1962.

Morphet, Edgar L., John L. Roe and Florence L. Keller. Educational Concepts Practices and Issues. Englewood Cliffs, New Jersey: Prentice Hall, 1959.

Prall, Charles E. and C. Leslie Cushman. Teacher Education Inservice. Washington, D.C.: American Council on Education, 1964.

President's Commission on Higher Education. Higher Education for American Democracy. Washington, D.C.: Department of Health, Education and Welfare, 1947.

Rogers, Meverett. Diffusion on Innovations. New York: Free Press of Glencoe, 1962.

Rugg, Harold. The Teacher of Teachers. New York: Harper and Brothers, Pub., 1952.

Spears, Harold. Curriculum Planning Through Inservice Programs. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1957.

Taylor, Harold W. The American College President. New York: Harper and Brothers, 1959.

Tead, Ordway. Administration, Its Purpose and Performance. New York: Harper and Brothers, 1959.

U.S. Department of Health, Education and Welfare. Education for a Changing World of Work. Washington: U.S. Government Printing Office, 1963.

Webster,Noah. Webster's New World Dictionary of the American Language. New York: The World Publishing Company, 1962.

Wilson, Logan. The Academic Man, A Study in the Sociology of a Professor. New York: Oxford University Press, 1942.

Wiles,Kimball. Supervision for Better Schools. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1956.

Wiles, Kimball. The Changing Curriculum of the American High School. Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1963.

Articles and Periodicals

Antell, Henry and Edgar Stahl. "What Constitutes an Effective In-Service Education Program," Bulletin of the National Association of Secondary School Principals, XL (April, 1956), 147-152.

Beery, John R. and Mark Murfin. "Meeting Barriers to In-Service Education," Educational Leadership, XVII (March, 1960), 351-355.

Durkee, Frank M. "Organizing for Growth in Service," Educational Leadership, XVII (March, 1963), 458-501.

Fowler, George W. "Purposeful Program of Teacher Training," National Education Association Journal, (April, 1957), 380.

Gilchrist, Robert S. "Highway to Quality Teaching," National Education Association Journal, XLVII (May, 1959), 18-19.

Gordon, I. J. "The Creation of an Effective Faculty Advisor Training Program Through Group Procedures," Educational and Psychological Measurement, X (Spring, 1950), 505-512.

Gray, W. S. "The Professional Education of College Teachers," The Study of College Instruction, National Society of College Teachers of Education Yearbook, XXVII, Chicago: University of Chicago Press, 1939.

Guzzeta, Dominico. "Growth Through In-Service Training," Phi Delta Kappan, XXXVI (May, 1955), 311-321.

Hanna, John A. "The American Land Grant University System: Its Origin and Basic Principles," Journal of the East Pakistan Academy for Rural Development, Comilla, III, (April, 1963) 6.

Hansen, Morris H. and William H. Hurwitz, "The Problem of Non-Response in Sample Surveys," Journal of the American Statistical Association, XLI (1946), 517-529.

Havighurst, Robert J. "The Governing of the University," School and Society, (March 20, 1954) 81-86.

Hefferman, Helen. "Inservice Education of Teachers in the Modern School," California Journal of Elementary Education, XXV (August, 1960), 1.

Hoppock, Robert. "Job Satisfaction Researches of 1960," Personnel and Guidance Journal, XL (December, 1961), 373.

Kelley, William F. "Twenty Studies of In-Service Education of College Faculty and the Procedures Most Recommended," Educational Administration and Supervision (Oct., 1956), 351-358.

Kirpal, P. N. "In-Service Training of Teachers," Teacher Education. New Delhi: Directorate of Extension Programs for Secondary Education; VI (march-April, 1962), 8.

Moktader, M. A. "Introduction," East Pakistan Education Extension Centre Bulletin, Dacca; I (December '60-February'62), 1.

Misner, Paul J. "Inservice Education Comes of Age," Journal of Teacher Education, I (March, 1950), 32.

Norris, Robert B. "Administering In-Service Education in the College," School and Society, (May, 1953), 327-329.

Neyman, J. "Contributions to the Theory of Sampling Human Populations," Journal of the American Statistical Association, XXXV (1938), 101-116.

Parker, J. Cecil, and William P. Golden,Jr. "Inservice Education of Elementary and Secondary School Teachers," Review of Educational Research, XXII (June, 1952), 193-200.

Sharafuddin, A. M. "In-Service Teacher Education," East Pakistan Education Extension Centre Bulletin, Dacca; II (Oct-Dec, 1962), p. 12.

Slaggen, Fred C. "Inservice Program Trends," National Association of Secondary School Principals, XXXVI (April, 1953), 152-159.

Srimali, K. L. "The Improvement of the Teacher," Teacher Education. New Delhi: The Directorate of Extension Programs for Secondary Education; VI (March-April, 1962), 94.

Taylor, Bob L. "Factors Affecting Teacher Education Programs," Journal of Educational Research, (May, 1959), 336-338.

Weber, C. A. "Reactions of Teachers to Inservice Education in Their Schools," School Review, (April, 1940), 247.

Weber, C. A. "Obstacles to be Overcome in a Program of Education for Teachers in Service," Educational Administration and Supervision, (December, 1942), 425-430.

Wilson, Francis M. "What Makes an Effective Inservice Training Program?" Journal of the National Association of the Deans of Women, XVI (1953), pp. 51-56.

Reports

Ade, Lester K. Inservice Education of Teachers. Bulletin No. 155, Harrisburg, Pennsylvania: Department of Public Instruction, 1939.

American Council on Education. The Improvement of Teacher Education. A Final Report of the Commission of Teacher Education, Washington, 1946.

Education Directorate, East Pakistan. Report on the Ground Survey of Educational Institutions of East Pakistan (May 20-June 10, 1960), Part II, (Secondary Education), Dacca: East Pakistan Government Press, 1961.

Government of East Pakistan. Scheme for Establishment of an Education Extension Centre for East Pakistan. Dacca: East Pakistan Government Press, 1960.

Government of Pakistan, Planning Commission. The Second Five-Year Plan (1960-65). Karachi: Pakistan Government Press, 1960.

Government of Pakistan. Report of the Commission on National Education. Karachi: Government of Pakistan Press, 1959.

Khan, Md. Ferdouse. "Some Urgent Problems in Education," Presidential Address, Education and Social Science Section. Seventh Pakistan Science Conference. Karachi: February, 1965.

Myers, Noel T. The Sixth Milestone: ICA and Education in the Philippines. Annual Report, USOM, ICA, Manilla, Philippines, 1958.

National Commission on Teacher Education and Professional Standards. The Development of the Career Teacher: Professional Responsibility for Continuing Education. Report of the 1963-64 Regional TEPS Conferences, Washington, D.C.: National Education Association of the United States, 1964.

Sledge, George W.,George P. Devoe and Harold M. Byram. Principles for Practices for Planning In-Service Educational Programs for Teachers of Vocational Agriculture in the Central Region. Madison, University of Wisconsin: Dept. of Agriculture and Extension Education, 1959 (mimeographed).

Summaries of Studies in Agricultural Education. U.S. Department of Health, Education and Welfare, Office of Education, Washington, D.C., 1956-60.

UNESCO Report on the Regional Meeting of Representatives of Asian Member States on Primary and Compulsory Education. Karachi, December, 1959-January, 1960. Paris: UNESCO/ED/173, February 29, 1960, p. 17.

UNESCO. The Education and Training of Teachers for Primary Schools. Hamburg: UNESCO Institute for Education, 1957.

University of Chicago, Pakistan Education Project. Report of Progress, May 23-1958-June 30-1963, Chicago, Illinois, 1963.

Unpublished Material

Boyd, Claude Collins. "A Study of the Relative Effectiveness of the Selected Methods of In-Service Education for Elementary School Teachers." Unpublished Ed.D. dissertation, University of Texas, 1961.

Bukhamana, Charootasana. "The Problems of Student Teachers in the Secondary Schools of Thailand as a Basis for the Improvement of the Undergraduate Teacher Education Program," Unpublished Ed.D. dissertation, Indiana University, 1962.

Browns, Marjery Frances. "A Survey of the Guidance In-Service Training Programs and Courses Offered by Institutions of Higher Education in the Pacific Coast States," Unpublished Ph.D. dissertation, University of Washington, 1962.

Britt, John Francis. "A Criterion Study of Inservice Education for
the Archdiocesan Elementary Lay Teacher." Unpublished Ph.D.
dissertation, St. Louis University, 1962.

Cyphert, Frederick R. and Ernest Spaights. "Analysis and Projection
of Research in Teacher Education." Columbus: Ohio State University
Research Foundation (mimeographed).

Deems, Howard M. "An Evaluation of the In-Service Program Provided
by the University of Nebraska for Teachers of Vocational Ag-
riculture." Unpublished Ed.D. dissertation, University of Missouri,
1956.

Diggs, Kermit Hunter. "In-Service Education of Teachers of Vocational
Agriculture in Virginia." Unpublished Ed.D. dissertation, Cornell
University, 1957.

Draytons, Earl Mash. "Inservice Teacher Education in Oregon Junior
High Schools." Unpublished Ed.D. dissertation, University of
Oregon, 1960.

Duncan, Billy Milton. "A Study of Factors Associated with the Success-
ful Operations of In-Service Programs of Education in Selected
Alabama Schools." Unpublished Ed.D. dissertation, University of
Alabama, 1964.

East Pakistan Education Extension Centre, Dacca. Mimeographed Workshop
Programs for "Teachers for Social Studies" Sept. 6-17, 1960; "Study
Conference for Heads of Pilot Schools," March 17-25, 1965; "18th
Workshop for Arts and Crafts Teachers of High Schools" February
8-27, 1965; "26th Short Course for Science Teachers," Feb. 8-20,
1965; "Short Training Course for English Teachers of Primary Schools,"
Sept. 19, 1964.

East Pakistan Education Extension Centre, Dacca. "Working Paper for the
Twenty-first Study Conference of Headmasters and Headmistresses
of High Schools," March, 1959 (mimeographed).

Gross, Richard E. "A Study of In-Service Education Programs for
Student Personnel Workers in Selected Colleges and Universities
in the United States." Unpublished Ph.D. dissertation, Michigan
State University, 1963.

Grant, Sydney Robert. "Teachers as Curriculum Workers." Unpublished
Ed.D. dissertation, Columbia University, 1961.

Hassouna, Mohammad Munir. "A Proposed In-Service Program in Audio-
Visual Education for Teachers in Industrial Schools in Cairo,
Egypt." Unpublished Ed.D. dissertation, Indiana University, 1962.

Herron Jr., Orley R. "A Study of Inservice Education Programs for Boards of Trustees in Selected Colleges and Universities in the United States." Unpublished Ph.D. dissertation,Michigan State University, 1965.

Horner, T. James. "An Evaluation of the In-Service Education Program Provided for Teachers of Vocational Agriculture by North Carolina State College." Unpublished Ed.D. dissertation, University of Missouri,1959.

Householder, William Allen. "An Evaluation of Work Experience Programs as an Element of Agricultural Education in a Panamanian School of Agriculture." Unpublished Ph.D. dissertation, Michigan State University, 1965.

Houston, Jr., William Robert. "Selected Methods of In-Service Education and the Mathematics Achievement and Interest of Elementary School Pupils." Unpublished Ed.D. dissertation, University of Texas, 1961.

Karbal, Harold T. "The Effectiveness of a Workshop as a Means of Inservice Education of Teachers." Unpublished Ed.D. dissertation, Wayne State University, 1963.

Kebret, Makonen. "The Contribution of Agricultural Education to the Rural Development of Ethiopia." Unpublished Ph.D. dissertation, Cornell University, 1964.

Laws, Ruth M. "A Study of the Inservice Education Needs of Homemaking Teachers in Delaware." Unpublished Ed.D. dissertation, New York University, 1956.

Maston, Robert Edward. "English Language Workshop for English Teachers of South Korea: Inservice Experiences Leading to a Mastery of English Structures Through an Audio/Lingual Pattern Practice Approach." Unpublished Ph.D. dissertation, University of Michigan, 1963.

Miller Theodore Roosevelt. "Selected University of Houston Graduates Appraisal of Their Pre-Service Preparation and In-Service Educational Needs for Public Junior High School Teaching." Unpublished Ed.D. dissertation, University of Houston, 1964.

Nizami, Feroz Ahmed. "Comparison of Teacher Education Programs for Secondary School Teachers in India and the United States." Unpublished Ph.D. dissertation, Southern Illinois University, 1963.

Robles, Juan. "The Effects of a Special Program of Teacher Education and Supervision Upon Job Satisfaction of Vocational Agricultural Instructors of Puerto Rico." Unpublished Ph.D. dissertation, Pennsylvania State University, 1959.

Santiago, Alicia A. "A Study of the In-Service Education of Public Secondary Schools in Manilla, Philippines." Unpublished Ed.D. dissertation, Indiana University, 1959.

Santos, M. Bruno. "An Analysis of In-Service Training Needs and Participation in In-Service Training Programs by Teachers of Agriculture Schools of the Philippines." Unpublished Ph.D. dissertation, Michigan State University, 1961.

Schulmans, Benson Richard. "The Role of University Extension in Meeting the In-Service Education Needs of School Districts." Unpublished Ed.D. dissertation,University of California, Los Angeles, 1964.

Schild, Robert Joseph. "A Survey of Certain Practices and Some Proposed Directions for In-Service Education Programs in Selected Schools of the APSS. "Unpublished Ed.D dissertation, Columbia University, 1964.

Selser, Will Lindsey. "An Evaluation of an In-Service Institute for Improving Science and Mathematics Instruction in the Hillsborough County Junior High Schools." Unpublished Ed.D. dissertation, University of Florida, 1962.

Smith, B. O. "Knowledge about Knowledge for Teachers. University of Illinois, 1961 (mimeographed).

Sudershanam, Ratna. "A Study of In-Service Teacher Education of Secondary School Teachers in Andra Pradesh State, India." Unpublished Ed.D. dissertation, Indiana University, 1958.

Sunhchawee, Aree. "Development of Guidelines for an In-Service Leadership Training Program for the Staffs of the Teacher Education Institutions in Thailand, Based on a Study of Two Selected Institutions." Unpublished Ed.D. dissertation, Columbia University, 1963.

Swearingen. "Developing Bases for Education of Supervisors in Florida." Unpublished Ph.D. dissertation, Ohio State University, 1950.

Tandoc, Florengel Sevidal. "Suggestions for Improving the In-Service Education Program of High School Home Economics Teachers in Luzon, Philippines." Unpublished Ph.D. dissertation, Michigan State University, 1962.

Taylor, Bob Leslie. "The Status of In-Service Teacher Education in the Public Senior High Schools of the State of Indiana." Unpublished Ed.D. dissertation, University of Indiana, 1957.

Truit, John W. "Inservice Training Programs for Student Personnel Workers." Denver, Colorado: 1961 (mimeographed).

Vossbrink, Meta. "An Analysis of the Inservice Education Program for Home Economics Teachers with Suggestions for Improving the Michigan Program." Unpublished Ph.D. dissertation, University of Chicago, 1953.

West, Leroy Clinton. "Effectiveness of a Television-Correspondence-Study Method of In-Service Teacher Education." Unpublished Ed.D. dissertation, University of Florida, 1961.

Other Sources

Board of Intermediate and Secondary Education, Dacca. Personal tape recorded discussions with Mr. Md. Ferdouse Khan, Chairman, March, 1965.

Department of Education, Government of East Pakistan, Dacca. Personal tape recorded disucssions with Mr. A.R. Chowdhury, C.S.P. Deputy Secretary, March, 1965.

Directorate of Public Instruction, Government of East Pakistan, Dacca. Personal tape recorded discussions with Mr. A.S. Khan Chowdhury, Deputy Director, March, 1965.

East Pakistan Education Extension Centre, Dacca. Personal discussions with Mr. M.A. Moktader, Director, March, 1965.

East Pakistan Education Extension Centre, Dacca. Personal tape recorded discussions with Dr. A. M. Sharafuddin, Deputy Director, March, 1965.

Teachers Training College, Dacca, East Pakistan. Personal tape recorded discussions with Mr. Osmar Ghani, Principal, March, 1965.

Text Book Board, Dacca, East Pakistan. Personal discussions with Mr. Fazlur Rehman, Chairman, January, 1965.

APPENDIX A

APPENDIX A

INSTRUMENT A

In-Service Education Needs of Teachers

OPEN ENDED QUESTIONS

A. When I remember my life as a high school teacher, the first few things that I like most and the thing I dislike most are:

B. As a teacher I often face many needs in my teaching. The following are some of the needs which if fulfilled will help me to carry out my teaching with more efficiency.

C. When I need help in connection with my teaching program I can get additional help from:

D. When I use the phrase, In-Service Education of Teachers I mean:

E. For the improvement of In-Service Education of Teachers I feel the following steps should be taken:

F. When I recall my experience with the East Pakistan Education Extension Centre, the first few things that come to my mind are:

APPENDIX B

APPENDIX B

INSTRUMENT B

Sheikh M. Noor

Instrument No. _____

Date Filled out _____

BE SURE TO ANSWER ALL QUESTIONS

IN-SERVICE EDUCATION NEEDS OF TEACHERS

A.   Bio Data

1.   School _____

2.   Sex: Male _____   Female _____

3.   Age:
     Below 20 ___ 20-24 ___ 25-29 ___ 30-34 ___ 35-39 ___ 40-44 ___ 45-49 ___ 50-54 ___ 55-59 ___ 60-over ___

4.   Marital Status: Single _____   Married _____   Widowed _____   Divorced _____

5.   Religion: Muslim _____   Hindu _____   Christian _____   Buddhist _____   Other _____
                                                                                              specify

6.   Education: (please indicate highest degree earned)

     Year _____

     i) Masters of Science _____

     ii) Masters of Art _____

     iii) Masters of Commerce _____

     iv) Incomplete Master's _____   Arts _____   Science _____   Commerce _____

     v) Bachelor of Arts _____

     vi) Bachelor of Science _____

     vii) Bachelor of Commerce _____

ix) Intermediate Science ___

x) Intermediate Arts ___

xi) Intermediate Commerce ___

xii) Incomplete Intermediate ___ Arts ___ Science ___ Commerce ___

xiii) Matriculate ___

xiv) Under Matriculate ___

xv) Doctorate ___

7. Training in education: (please indicate highest training earned)

Year ___

i) B.T. ___

ii) B.Ed. ___

iii) M.Ed. ___

iv) One year training in agricultural education ___

v) Graduate from Junior Teacher's Training College ___

vi) Others ___

8. Years of experience as teacher:

Less than 1 year	1-1.9	2-2.9	3-3.9	4-4.9	5-9.9	10-14.9	15-19.9	20-24.9

25-over

9. Subjects currently taught: (please write in)

   i) _____ periods weekly _____ level of training _____

   ii) _____ periods weekly _____ level of training _____

   iii) _____ periods weekly _____ level of training _____

   iv) _____ periods weekly _____ level of training _____

   v) range of total periods taught daily: (encircle two correct numbers) 0 1 2 3 4 5 6 7

   vi) number of assignments besides teaching (indicate) _____

   vii) please list the assignments: _____

10. Classes currently taught: (encircle correct number)

    VI VII VIII IX X XI XII

11. Number of times you have attended any type of training program arranged by Education Extension Centre: (encircle correct number)

    0 1 2 3 4 5 6 7 8 9 or more

12. Indicate the type of community you spent most of your time in before entering the teaching profession.

    _____ in the village

    _____ in a town with less than 5,000 population

    _____ in a town with 5,000 to 10,000 population

    _____ in a town with 10,000 to 50,000 population

    _____ in a town with more than 50,000 population

13. Check those bases upon which one may earn a salary increase or promotion in your school: (check as many items as apply. Indicate their degree of importance on the rating scale by drawing a circle around the "4" for great importance and "o" for the no importance, others in between).

| | Degree of Importance | | | | |
	No Importance	Little Importance	Average Importance	More Importance	Great Importance
i) Advanced degree, M.A., M.Sc. Etc.	0	1	2	3	4
ii) Training in teacher training college	0	1	2	3	4
iii) Training in Education Extension Centre	0	1	2	3	4
iv) Promise and merit	0	1	2	3	4
v) Professional writing	0	1	2	3	4
vi) Educational travel	0	1	2	3	4
vii) Good teaching	0	1	2	3	4
viii) Seniority	0	1	2	3	4
ix) Favoritism by superiors	0	1	2	3	4
x) Others (specify)	0	1	2	3	4
xi) Others (specify)	0	1	2	3	4

Statement:

As school teachers, we often face many needs in our teaching. Sometimes we solve the need alone, sometimes with the help of friends, colleagues or others; and sometimes we cannot meet the need. We know we still have many needs which, if fulfilled, will help us to carry out our job with more efficiency.

Directions:

Below is given a list of some needs which are often faced by all of us as teachers and we would like to learn more about them. In order to determine which are the needs that are most important for teachers please indicate your honest reaction, so that future actions may be planned. Please identify the areas in which you generally feel, as a teacher, you have the great need by drawing a circle around the "4" and those in which you have no need by "0," and those in between by "1," "2," "3,". This information will be treated with extreme confidence and secrecy and would be used for research purposes only. Your name will not appear on any of these forms. Your questionnaire will be identified only on a code number known to the researcher.

B. Subject Matter Content

"I NEED TO INCREASE MY KNOWLEDGE IN THE SUBJECTS I TEACH."

(Write in the names of the subjects you teach)

| | | Degree of Need | | |
	No Need	Little Need	Average Need	More Need	Great Need
1. _____	0	1	2	3	4
2. _____	0	1	2	3	4
3. _____	0	1	2	3	4
4. _____	0	1	2	3	4
5. _____	0	1	2	3	4
6. _____	0	1	2	3	4

C. Curriculum

"I NEED TO DEVELOP AN INCREASED UNDERSTANDING AND APPRECIATION OF THE VARIOUS CHANGES PROPOSED AND ADOPTED BY THE COMMISSION NATIONAL ON EDUCATION."

	No Need	Little Need	Average Need	More Need	Great Need
1. Basic philosophy and concepts of new education system	0	1	2	3	4
2. Implementation and use of new syllabus	0	1	2	3	4
3. Use of new textbook	0	1	2	3	4
4. General scheme of studies	0	1	2	3	4
5. Appraisal of problems that are being faced by teachers in implementation of new curriculum	0	1	2	3	4

D. Methods of Teaching

"I NEED TO LEARN HOW I MAY"

	No Need	Little Need	Average Need	More Need	Great Need
1. Prepare and use films, charts, graphs (audio-visual materials)	0	1	2	3	4
2. "Mark" student impartially	0	1	2	3	4
3. Teach slow learners	0	1	2	3	4
4. Manage unruly classes	0	1	2	3	4
5. Teach large classes	0	1	2	3	4
6. Adapt teaching for bright and less bright students	0	1	2	3	4
7. Discover needs most urgently felt by students	0	1	2	3	4
8. Do less lecturing and get more discussion	0	1	2	3	4
9. Arouse more interest in the subject	0	1	2	3	4
10. Be certain that the students understand me	0	1	2	3	4
11. Develop leadership in students	0	1	2	3	4
12. Teach students to think and to understand	0	1	2	3	4
13. Develop "unit" method of instruction	0	1	2	3	4
14. Use field trips in my teaching	0	1	2	3	4
15. Use problems and projects more effectively	0	1	2	3	4
16. Use small group discussions effectively	0	1	2	3	4
17. Use role playing effectively	0	1	2	3	4
18. Use resource persons effectively	0	1	2	3	4
19. Provide better demonstrations	0	1	2	3	4

	Degree of Need				
	No Need	Little Need	Average Need	More Need	Great Need

E. Personality as a Teacher

"I NEED TO INCREASE MY ABILITY TO"

	No Need	Little Need	Average Need	More Need	Great Need
1. Work with my students	0	1	2	3	4
2. Work with my colleagues	0	1	2	3	4
3. Work with guardians	0	1	2	3	4
4. Behave in a friendly manner regardless of my personal problems	0	1	2	3	4
5. Lead a good life, to enjoy work and play	0	1	2	3	4
6. Improve home, school and community living	0	1	2	3	4

F. Human Growth and Development

"I NEED TO UNDERSTAND BETTER"

	No Need	Little Need	Average Need	More Need	Great Need
1. What children's and students' interests are	0	1	2	3	4
2. How children learn to be good citizens	0	1	2	3	4
3. How children grow and develop physically	0	1	2	3	4
4. How children grow and develop mentally	0	1	2	3	4
5. How children accept religious values	0	1	2	3	4

G. Principles of Learning

"I NEED TO UNDERSTAND BETTER HOW STUDENTS REALLY LEARN AND THE CONDITION OF EFFECTIVE LEARNING"

	No Need	Little Need	Average Need	More Need	Great Need
1. Relation between maturity and learning	0	1	2	3	4
2. Teacher guidance of learning activities	0	1	2	3	4
3. Practice as a condition of learning	0	1	2	3	4
4. Transfer of training	0	1	2	3	4
5. Perceiving the effects of trials	0	1	2	3	4
6. Motivation and learning	0	1	2	3	4
7. Mental health and learning	0	1	2	3	4
8. Relation of remembering and forgetting with learning	0	1	2	3	4

Degree of Need

	No Need	Little Need	Average Need	More Need	Great Need

H. **Administration and Supervision**

"I NEED TO KNOW MORE ABOUT"

	No Need	Little Need	Average Need	More Need	Great Need
1. My role as a teacher within the classroom	0	1	2	3	4
2. My role as a teacher outside the classroom	0	1	2	3	4
3. Ethical behavior as teacher	0	1	2	3	4
4. School laws and regulations	0	1	2	3	4
5. Philosophy and objectives of school administration	0	1	2	3	4
6. The process of policy and decision-making	0	1	2	3	4
7. Leadership (how I may become a leader)	0	1	2	3	4
8. Group dynamics (how I may work as a group member)	0	1	2	3	4
9. Writing of reports	0	1	2	3	4
10. My relationship to the headmaster and other school officials	0	1	2	3	4
11. My relationship to the managing committee	0	1	2	3	4

I. **Sources of Teaching Materials**

"I NEED TO GET SOME HELP REGARDING SOURCES OF THE FOLLOW-ING TEACHING MATERIALS FOR USE IN CLASSROOM"

	No Need	Little Need	Average Need	More Need	Great Need
1. Printed materials	0	1	2	3	4
2. Audio-visual materials	0	1	2	3	4
3. Community resources and materials for field trips	0	1	2	3	4

J. **Co-Curricular Activities**

"I NEED TO KNOW HOW TO ORGANIZE, PARTICIPATE IN AND GUIDE"

	No Need	Little Need	Average Need	More Need	Great Need
1. Student organizations and activities:					
a. Boy Scouts	0	1	2	3	4
b. Girl Guides	0	1	2	3	4
c. Chand Tara Club	0	1	2	3	4
d. Junior Red Cross	0	1	2	3	4
e. Sabuj Sangha Club	0	1	2	3	4
f. Other (agricultural and rural youth club-specify)_____	0	1	2	3	4
g. Others (specify)_____	0	1	2	3	4

	Degree of Need				
	No Need	Little Need	Average Need	More Need	Great Need
2. School and student publications	0	1	2	3	4
3. Meetings of guardians, teachers and administrators	0	1	2	3	4
4. Teacher-Student Club	0	1	2	3	4
5. Home visitation program by teachers	0	1	2	3	4
6. Programs for community work, e.g., night school, flood relief, etc.	0	1	2	3	4
7. Programs or projects for improvement of school buildings and grounds	0	1	2	3	4
8. "Career Carnival," "Education Week," "Students Week,"etc.	0	1	2	3	4
9. Programs for manual work	0	1	2	3	4
10. Others (specify) _____	0	1	2	3	4

K. Research and Experimentation

"I NEED TO KNOW MORE ABOUT"

	No Need	Little Need	Average Need	More Need	Great Need
1. How to conduct small studies and experiments in my classroom, in the school and/or in the community	0	1	2	3	4
2. Opportunities to participate in large-scale research programs	0	1	2	3	4
3. How to make a survey of educational resources	0	1	2	3	4
4. Others (specify) _____	0	1	2	3	4

L. General Education

"I NEED TO INCREASE MY GENERAL KNOWLEDGE AND UNDERSTANDING OF"

	No Need	Little Need	Average Need	More Need	Great Need
1. Current literature	0	1	2	3	4
2. Art	0	1	2	3	4
3. Music	0	1	2	3	4
4. Philosophy of education	0	1	2	3	4
5. New ideas in education	0	1	2	3	4
6. Current national affairs	0	1	2	3	4
7. Current world affairs	0	1	2	3	4

		Degree of Need			
	No Need	Little Need	Average Need	More Need	Great Need
	0	1	2	3	4
8. New books in education	0	1	2	3	4
9. English language:					
a. Total command	0	1	2	3	4
b. Especially my ability to speak	0	1	2	3	4
c. Especially my ability to read	0	1	2	3	4
d. Especially my ability to write	0	1	2	3	4
10. Bengali language	0	1	2	3	4
11. Urdu language	0	1	2	3	4
12. Efficient method of using school library	0	1	2	3	4
13. Community development in social economic affairs	0	1	2	3	4
14. Other fields (specify) _____	0	1	2	3	4

M. Sources of Educational Help

Statement:

We all find need for help. All teachers from time to time find they have need for educational help. Where we go for help naturally depends upon the resources that are available to us at that time.

Directions:

First, please review the following list of sources of educational help. At the left, in Column A, circle "yes" or "no" to show each type of help you yourself have used at any time during your teaching career. Next, at the right, in Column B, please indicate to what degree you feel the need for help of each type, whether you checked "yes" or "no" in the left hand column.

225

Column A Help Used		Column B — MARK THIS COLUMN WHETHER OR NOT YOU ACTUALLY RECEIVED HELP					
Yes	No	Sources of Educational Help	No Need	Little Need	Average Need	More Need	Great Need
Yes	No	1. Teachers in my school	0	1	2	3	4
Yes	No	2. Teachers in another school	0	1	2	3	4
Yes	No	3. My former students	0	1	2	3	4
Yes	No	4. My former primary or secondary school teachers	0	1	2	3	4
Yes	No	5. My former professors	0	1	2	3	4
Yes	No	6. Professors from local colleges	0	1	2	3	4
Yes	No	7. Headmaster	0	1	2	3	4
Yes	No	8. Assistant Headmaster	0	1	2	3	4
Yes	No	9. Secretary of the school	0	1	2	3	4
Yes	No	10. Inspector of schools	0	1	2	3	4
Yes	No	11. Specialists from Education Extension Centre	0	1	2	3	4
Yes	No	12. Other education officers (SDEO, DEO, etc.)	0	1	2	3	4
Yes	No	13. Foreign specialists and advisors	0	1	2	3	4
Yes	No	14. Peace Corps Volunteers	0	1	2	3	4
Yes	No	15. Agricultural officers	0	1	2	3	4
Yes	No	16. Faculty from Pakistan Academy for Rural Development	0	1	2	3	4
Yes	No	17. Basic democrats	0	1	2	3	4
Yes	No	18. Other government officers (specify)	0	1	2	3	4
Yes	No	19. Political leaders (not in office)	0	1	2	3	4
Yes	No	20. Journalist, newspaperman or radio broadcasters	0	1	2	3	4
Yes	No	21. Local business, agricultural or professional person	0	1	2	3	4

N. Classroom Visitors

Statement:

A number of persons visit the average classroom from time to time. We would like to get some idea of which of these kinds of people have visited you and to what extent you have found them valuable or not valuable.

Directions:

1. On the left-hand, in Column A, please indicate the number of times the visitor visited your classroom during the year 1964. If no visit was made, write "o".

2. In Column B, indicate how you feel about visits by such persons. Please circle "V" if you feel this person was valuable in helping you, "N" if this person was not valuable in helping you, and "U" if you have no definite opinion or feeling about his help and visit.

3. In Column C, indicate your present feeling on the "Degree of Need" of this type of help.

Column A	Column B			Classroom Visitors	Column C				
	Your attitude toward visitor				MARK THIS COLUMN WHETHER OR NOT YOU RECEIVED A VISIT				
							Degree of Need		
Visits Made	Val.	Uncer-tain	Not Val.		No Need	Little Need	Average Need	More Need	Great Need
____	V	U	N 1.	Headmaster	0	1	2	3	4
____	V	U	N 2.	Assistant Headmaster	0	1	2	3	4
____	V	U	N 3.	Inspector of schools	0	1	2	3	4
____	V	U	N 4.	Education Officer (SDEO,DEO,etc.)	0	1	2	3	4
____	V	U	N 5.	Instructor from Teachers Training Center	0	1	2	3	4
____	V	U	N 6.	Specialist from Education Extension Centre	0	1	2	3	4
____	V	U	N 7.	Foreign Advisor	0	1	2	3	4
____	V	U	N 8.	Peace Corps Volunteer	0	1	2	3	4
____	V	U	N 9.	Agricultural officers	0	1	2	3	4
____	V	U	N 10.	Others _____	0	1	2	3	4

O. Use of Community Educational Resources

Statement:

A wide variety of educational resources are usually available in a community for use by the school. We would like to get some idea on the extent of use of such available community resources in classroom teaching.

Directions:

1. On the left, in Column A, indicate whether the resources are available or not for use in your school.

2. If you have circled yes, i.e., it is available, then indicate your attitude towards this resource in Column B. Please mark L if you like to use it, D if you don't like to use it, and U if you have no definite opinion about this resource.

3. In Column C, indicate your present feeling on the "Degree of Need" of this type of help, irrespective of your "yes" or "no" in Column A.

Column A Available	Column B	Community Educational Resources	Column C Degree of Need				
Yes No	Like Uncertain Do Not Like		No Need	Little Need	Average Need	More Need	Great Need
Yes No	L U D	1. Agricultural Extension Service	0	1	2	3	4
Yes No	L U D	2. Agricultural information service	0	1	2	3	4
Yes No	L U D	3. Health officials	0	1	2	3	4
Yes No	L U D	4. Industrial business or coopera-tive concerns (mill, factory,etc)	0	1	2	3	4
Yes No	L U D	5. Social workers	0	1	2	3	4
Yes No	L U D	6. Basic Democrats	0	1	2	3	4
Yes No	L U D	7. Religious organizations	0	1	2	3	4
Yes No	L U D	8. Political organizations	0	1	2	3	4
Yes No	L U D	9. U.S. Information Service	0	1	2	3	4
Yes No	L U D	10. Pakistan Information Service	0	1	2	3	4
Yes No	L U D	11. British Information Service	0	1	2	3	4
Yes No	L U D	12. Public Library	0	1	2	3	4
Yes No	L U D	13. Air Agencies (PIA,Pan Am,BOAC,etc)	0	1	2	3	4
Yes No	L U D	14. Others	0	1	2	3	4

P. In-Service Education Activities

Statement:

The following are some of the activities which are usually available to help a teacher to learn more about teaching and about his profession. Please indicate in your opinion the need of such activities for our teachers.

Directions:

1. On the left, in Column A, please indicate the number of times you have participated in such a program within last three years. If no participation was made, then write "0."
2. Indicate your attitude towards that activity in Column B. Please mark V if you find the activity valuable, N if you find the activity not so valuable, and you don't want to participate anymore, or U if you have no definite opinion about this activity.
3. In Column C, indicate your personal feeling on the "degree of need" of such activities.

Column A	Column B			In-Service Education Activities	Column C				
No. times	Your Attitude				MARK THIS COLUMN WHETHER OR NOT YOU HAVE PARTICIPATED IN ACTIVITIES				
		Uncer-			Degree of Need				
Participated	Val.	tain	Not Val.		No Need	Little Need	Average Need	More Need	Great Need
___	V	U	N	1. Workshop by Education Extension Center	0	1	2	3	4
___	V	U	N	2. Short training courses by others	0	1	2	3	4
___	V	U	N	3. Organized educational trip	0	1	2	3	4
___	V	U	N	4. Student conventions (Boy Scouts, Girl Guides, Student Agricultural Club, etc.)					
___	V	U	N	5. Intervisitation of schools	0	1	2	3	4
___	V	U	N	6. Visitations of other classes in the school	0	1	2	3	4
___	V	U	N	7. Visitation of other classes in another school	0	1	2	3	4
___	V	U	N	8. Opportunity to observe others demonstrate teaching	0	1	2	3	4

Column A	Column B			Column C					
No. times Participated	Your Attitude			Degree of Need					In-Service Education Activities
	Val.	Uncertain	Not Val.	No Need	Little Need	Average Need	More Need	Great Need	
___	V	U	N	0	1	2	3	4	9. Evening or night classes at nearby educational institutions
___	V	U	N	0	1	2	3	4	10. Holiday class (Sunday or Friday)
___	V	U	N	0	1	2	3	4	11. Courses during vacations (Ramzan, summer, etc.)
___	V	U	N	0	1	2	3	4	12. Guest speakers
___	V	U	N	0	1	2	3	4	13. Correspondence work
___	V	U	N	0	1	2	3	4	14. East Pakistan Education Week
___	V	U	N	0	1	2	3	4	15. Meetings of professional societies
___	V	U	N	0	1	2	3	4	16. Teachers' conventions or conf.
___	V	U	N	0	1	2	3	4	17. School committees on profession improvement matters
___	V	U	N	0	1	2	3	4	18. Faculty meeting directed to professional improvement
___	V	U	N	0	1	2	3	4	19. Off-campus courses for credit
___	V	U	N	0	1	2	3	4	20. Consultation and conferences with agricultural officers regularly
___	V	U	N	0	1	2	3	4	21. Individual study

Q. Administrators' Education Needs

Statement:

Like teachers, administrators also need refresher courses or additional training in some areas of their responsibility. Please let us know the inservice education needs of your administrators as perceived by you as a teacher. You may add other aspects which we may not have included. As previously mentioned, all answers would be treated as strictly confidential and will be used for research purposes only.

Directions:

Please identify the areas in which you feel your administrator has the most need, by drawing a circle around "4" and those in which he has no need by "0" and those in between by "1," "2," and "3."

	Degree of Need				
	No Need	Little Need	Average Need	More Need	Great Need
1. Administrator's ability to:					
a. Work with students	0	1	2	3	4
b. Work with teachers	0	1	2	3	4
c. Work with members of the community	0	1	2	3	4
d. Behave in a friendly manner regardless of his personal problems	0	1	2	3	4
e. Lead a good life, to enjoy work and play	0	1	2	3	4
f. Improve home, school and community living	0	1	2	3	4
2. Curriculum					
a. Basic philosophy and concepts of new education system	0	1	2	3	4
b. Responsibilities for the implementation of new curriculum	0	1	2	3	4
c. Leadership role in planning, executing and evaluating new program	0	1	2	3	4
d. General scheme of studies	0	1	2	3	4
e. Implementation and use of new syllabus	0	1	2	3	4
f. Use of new textbook	0	1	2	3	4
g. Appraisal of problems that are being faced by teachers and administrators in implementation of new curriculum	0	1	2	3	4
3. Management and Supervision of Courses in:					
a. Humanities group	0	1	2	3	4
b. Science group	0	1	2	3	4
c. Commerce group	0	1	2	3	4
d. Industrial technical group	0	1	2	3	4
e. Languages group	0	1	2	3	4
f. Home economics group	0	1	2	3	4
g. Nursing group	0	1	2	3	4
h. Islamic studies group	0	1	2	3	4
i. Military science group	0	1	2	3	4
j. Agriculture group	0	1	2	3	4
4. Guidance and Counseling	0	1	2	3	4
5. School finance and budgeting	0	1	2	3	4
6. Staff organization and office management	0	1	2	3	4
7. School development programs	0	1	2	3	4
8. Leadership	0	1	2	3	4
9. Audio-visual methods of instruction	0	1	2	3	4

	Degree of Need				
	No Need	Little Need	Average Need	More Need	Great Need
10. Research and evaluation	0	1	2	3	4
11. The process of curriculum change	0	1	2	3	4
12. New ideas in examination methods	0	1	2	3	4
13. School laws and regulations	0	1	2	3	4
14. Policy formulation and democratic decision-making	0	1	2	3	4
15. Professional ethics	0	1	2	3	4
16. Schools as instruments for social change	0	1	2	3	4
17. Organization of experimental research in classroom	0	1	2	3	4
18. Organization of programs for manual work	0	1	2	3	4
19. Organization of school library	0	1	2	3	4
20. Arrangement of field trips	0	1	2	3	4
21. Organization of "Students Week," "Education Week," "Science Fair," etc.	0	1	2	3	4
22. Others (please write as many as you like)					
_____	0	1	2	3	4
_____	0	1	2	3	4
_____	0	1	2	3	4
_____	0	1	2	3	4
_____	0	1	2	3	4

R. Library Facilities

Directions:

Please rate the following, according to your opinion regarding your school library.

	No Need	Little Need	Average Need	More Need	Great Need
1. Larger number of books	0	1	2	3	4
2. Books of better quality	0	1	2	3	4
3. Books of recent publications	0	1	2	3	4
4. Books that are more useful for students	0	1	2	3	4
5. Convenient access to books, e.g., open shelf system	0	1	2	3	4
6. Arrangement of library hours for the convenience of the teachers	0	1	2	3	4
7. Arrangement of library hours for the convenience of the students	0	1	2	3	4
8. Books in your field of interest	0	1	2	3	4
9. Liberal lending policy	0	1	2	3	4

Degree of Need

	No Need	Little Need	Average Need	More Need	Great Need
10. Opportunity of reading time during working hours	0	1	2	3	4
11. Current magazines or journals	0	1	2	3	4
12. Newspapers	0	1	2	3	4
13. More training for the librarian	0	1	2	3	4
14. A trained librarian	0	1	2	3	4
15. Others (specify) _____	0	1	2	3	4
	0	1	2	3	4

S. **Limiting Factors in In-Service Education**

The following are some of the factors that may limit the attendance or participation of teachers at in-service education programs arranged by the Education Extension Centre. Please indicate the importance of each factor by circling 0, 1, 2, 3, or 4, whichever is applicable. 4 means great limiting factor; 0 means no limiting factor, others in-between.

Degree of Limitation

	No Limit.	Little Limit.	Average Limit.	More Limit.	Great Limit.
1. Teachers too busy with school work	0	1	2	3	4
2. Limited government travel grants	0	1	2	3	4
3. Limited government daily allowance while in training	0	1	2	3	4
4. Teachers do not feel the need to participate	0	1	2	3	4
5. No substitute teacher to take care of classes	0	1	2	3	4
6. Few workshops are held by Education Extension Centre	0	1	2	3	4
7. Time of workshop is not suitable	0	1	2	3	4
8. No or few invitations are received from Education Extension Centre	0	1	2	3	4
9. Teachers who attended programs arranged by Education Extension Centre did not find the work helpful	0	1	2	3	4
10. Family responsibilities	0	1	2	3	4
11. Private tuition consumes all time	0	1	2	3	4
12. Undue length of workshops limits the attendance	0	1	2	3	4
a. two weeks	0	1	2	3	4
b. three weeks	0	1	2	3	4
c. four weeks	0	1	2	3	4
d. three months	0	1	2	3	4
e. one year	0	1	2	3	4
13. Non-payment of expenses immediately after the workshop	0	1	2	3	4
14. Other limiting factors (please write in as many as you like - you may use the opposite page if needed)	0	1	2	3	4

T. Role of Teachers

The following are suggestions of activities that are included or may be included in the teachers program. Please indicate your reactions to these activities using a five point rating scale to indicate order of importance of each.

No, should not be done.   1
Undecided whether this should be done   2
Yes, may be done   3
Yes, should be done   4
Yes, must be done   5

	Rating Scale				
	Negative			Most	Positive
1. To teach high school students	1	2	3	4	5
2. To guide and advise students on their personal and instructional problems	1	2	3	4	5
3. To participate in both group and individual conferences with guardians	1	2	3	4	5
4. To visit homes of students	1	2	3	4	5
5. To serve on curriculum or other committees for the improvement of school programs	1	2	3	4	5
6. To work as an educational leader in the community	1	2	3	4	5
7. To help with school's clerical work	1	2	3	4	5
8. To work and continue his own further education	1	2	3	4	5

U. Reactions to the Teaching Profession

Statement:

Following are four questions which will help us to understand better your attitudes, reactions and satisfactions as a member of the teaching profession. Please indicate your honest opinion. This information will be treated with extreme confidence.

1. How well do you like teaching? (please check one item)

_____ I dislike it.
_____ I slightly dislike it.
_____ I am indifferent to it.
_____ I like it.
_____ I love it.

2. How much of the time do you feel satisfied with your profession? (please check one item)

_____ Seldom

_____ Occasionally

_____ About half of the time

_____ Most of the time

_____ Nearly all of the time

3. How do you feel about changing your teaching profession? (please check one item)

_____ I would quit teaching at once if I could get anything else to do.

_____ I would quit teaching for any other profession if I could earn much or more than I am earning now.

_____ I would not quit teaching, but I would like to teach in some other school.

_____ I would consider another job if it offers a greater prospect, including financial benefits and/or status.

_____ I would not exchange my teaching profession for any other profession.

4. How do you think you compare with other teachers on how you feel about the teaching profession? (please check one item)

_____ I dislike my job much more than most teachers dislike theirs.

_____ I dislike my job a little more than most teachers dislike theirs.

_____ I like my job about as well as most like theirs.

_____ I like my job better than most teachers like theirs.

_____ I like my job much better than most teachers like theirs.

PLEASE RECHECK AND BE SURE THAT YOU HAVE ANSWERED ALL QUESTIONS

THANK YOU

Note: This instrument was used for collecting data from the teachers. For collection of data from the administrators and consultants an instrument similar in content but different in organization was used. For further details please refer to Chapter IV.

APPENDIX C

INSTRUMENT C

Instructions: Please respond to the question below by writing <u>Yes or No</u> on the spaces provided before each item:

QUESTION: Would your institution be in a position and willing to:

_____ 1. Cooperate with the East Pakistan Education Extension Centre in providing and conducting in-service training programs for teachers?

_____ 2. Provide funds for the traveling expenses of members of your education faculty who may be invited by the East Pakistan Education Extension Centre and authorized by your institution to serve in workshops, seminars, or conferences of secondary school teachers?

_____ 3. Offer refresher or advance courses specially for teachers who express the need for these courses?

_____ 4. Initiate a follow-up program consisting of on-job visits and conferences of teacher-trainees of your institutions (who have been trained or would be trained in your institution under cooperation of Education Extension Centre) in order to help them adjust to and become effective in their teaching jobs?

_____ 5. Organize off-campus classes on specific courses on the campuses of some schools during summer, if requested?

_____ 6. Arrange and make possible for teachers visiting your institution to confer with members of your faculty, listen to lectures, or observe the latest techniques and procedures used by your institution in its program?

_____ 7. Make available to teachers publications of your institution pertaining to teaching and other aspects of education for their professional information?

_____ 8. Participate in conferences, conventions or workshops on the various problems of education in the country?

_____ 9. Offer summer school scholarship consisting of free tuition to a limited number of outstanding teachers?

_____ 10. Sponsor workshops, seminars, and conferences for teachers?

_____ 11. Be host to participant teachers at workshops, etc. for the duration of these workshops?

_____ 12. Seek the suggestions or recommendations of Education Extension Centre officials and school administrators regarding teacher education curriculums?

Signed by:

Designation:

COVERING LETTER

Education Extension Centre

Dacca 2, East Pakistan   Phones: 80554 & 6323

Sheikh Mohammad Abdun Noor
Specialist in Agricultural Education   February, 1965

Dear Sir:

At the present I am attending the Michigan State University

East Lansing, U.S.A. as an officer on deputation from the Directorate

of Education, Government of East Pakistan.

As a part of the Doctoral program of study in Education,I am

planning to make an assessment of inservice education for the teachers

of secondary schools in East Pakistan.

I am enclosing herewith, a questionnaire, which forms a part

of my study program. I do sincerely hope that you would be kind

enough to steal some time from your busy schedule, and furnish me with

the desired information.

I would be very much obliged if you please mail me the answered

questionnaire on or before 2nd March 1965.

I am enclosing a stamped addressed envelop for your convenience.

I wish to thank you very sincerely for your help and co-operation.

Very cordially yours,

APPENDIX D

LIST OF INSTITUTIONS FROM WHICH DATA WERE COLLECTED

Abutorab Bilateral High School
Adarshah Hindu Vidalaya, Pirojpur
Armenitola Government (Pilot) High School, Dacca
Atharbari M.C. High School
Audio-visual Education Centre, Dacca
Bajalia High School
Balla Coronation High School
B.A.R. High School
Barisal Zilla (Pilot) High School
Basundia High School
Bawskart P.J. High School
Bengali Academy, Dacca
B.C. High School
Bhaitkand High School
Bhira, B.M.P. Girls School
Bijoypur High School, Comilla
Board of Intermediate and Secondary Education, Dacca
Bogra Zilla (Pilot) High School
British Council, Dacca
Byubt M.M. Girls High School
Central Government High School, Motijheel, Dacca
Charfassan High School
Chittogong Commercial College , Chittogong
Collegiate School (Pilot), Chittogong
Comilla Zilla Government High School (Pilot)
Companiganj Badiul Alam School, Comilla
Darirampur High School
Department of Education, Dacca
Dibya Palli High School
Directorate of Public Instruction, Dacca
Dr. Khastagir's (Pilot) High School, Chittogong
East Pakistan Agricultural Institute, Dacca
East Pakistan Agricultural University, Mymensingh
East Pakistan College of Arts & Crafts, Dacca
East Pakistan Education Extension Centre, Dacca
Faizunnesa Government Girls (Pilot) High School, Comilla
Faridpur Girls High School
Feni (Pilot) High School, Noakhali
Gazadia A.H. High School
Haridebpur High School, Rangpur
Home Economics College, Dacca
Husamia High School
Institute of Education & Research, Dacca
Jananankin High School
Jessore Zilla (Pilot) High School
Joyhari S.P.R.Y. Institute
Kaimari High Institution, Rangpur
Kaliganj B.M. (Pilot) High School

Kalsa A.V. Institution
Kamalganj High School
Karatia H.M. Institution, Mymensingh
Karnakati Gurudeb High School
Kashiganj B.M. High School
Khasmathurapur High School
Kishorimohan Girls High School, Sylhet
Lalmanirhat Model High School
Lokenath High School, Rajshahi
Manikganj Model High School, Dacca
Matlabganj Bhairab High School
Meherpur Model High School
Model High School, Sylhet
Mohonganj (Pilot) High School
Muktagacha R.K. High School, Mymensingh
Muladi M.J.B. High School
Muslim Girls School
Mymensingh Zilla (Pilot) High School
Nalta High School, Khulna
N.A. Memorial Institution
Nandina (Pilot) High School, Mymensingh
Naraniri (Pilot) High School, Chittogong
Narikelbari High Institution, Faridpur
National Development Training Institute, Dacca
Nikli G.E. High School
Nityanda High School, Chittogong
Paikpara Union Institution
Pakistan Academy for Rural Development, Comilla
Patya Model High School
Polytechnique Institute, Dacca
Qumrunnesa Government (Pilot) Girls High School, Dacca
Rahmatulla Academy, Dacca
Rajshahi Collegiate (Pilot) High School
Rajshahi Government P.N. Girls School
Ramkrisnapur K.K.R.K. High School
Rangpur Zilla (Pilot) High School
R.K.B.K. Harischandra Institute
Sailakupa Bilateral High School
Sailarani Girls High School, Comilla
Sammilani Institution, Jessore
Sardah (Pilot) High School, Rajshahi
Setabganj High School
Shamshernagar A.A.J.M. High School
Shibpur High School
Shidlai Ashraf High School
S.K. Girls High School
St. Nicolas Institution, Nagari, Dacca
S.V. Girls High School, Kishoreganj
Sylhet Zilla Government Boys (Pilot) High School
Sylhet Zilla Government Girls (Pilot) High School

Tangali V.S.M. Institution
Teachers Training College, Dacca
Thakurgaon High School
West End High School, Dacca
Ulipur M.S. High School
Yousouf High School, Comilla
Yogobia Girls High School, Bogra
Zorowalganj Model High School

APPENDIX E

APPENDIX E

The Procedure for Sampling of Teachers in Schools Visited:

Step 1: All teachers who had less than one year teaching experience were excluded from the sample.

Step 2: All teachers were listed alphabetically and grouped by the major subject they teach.

Step 3: The name of the first teacher in each group of subjects was included in the sample.

APPENDIX F

APPENDIX F

A "SAMPLE" TABLE

VARIABLE   1 DOWN BY VARIABLE 56 ACROSS

CODE	0	1	2	3	4	Total	Mean	Std Dev
1	13.00	13.00	29.00	52.00	115.00	222.00	3.09	1.19
PCT ACROSS	5.86	5.86	13.06	23.42	51.80	100.00		
PCT DOWN	86.67	92.86	93.55	85.25	78.77	83.15		
PCT OF TOTAL	4.87	4.87	10.86	19.48	43.07	83.15		
THEORET FREQ	12.47	11.64	25.78	50.72	121.39			
CELL CHI SQR	.02	.16	.40	.03	.34			
2	2.00	1.00	2.00	9.00	31.00	45.00	3.47	1.01
PCT ACROSS	4.44	2.22	4.44	20.00	68.89	100.00		
PCT DOWN	13.33	7.14	6.45	14.75	21.23	16.85		
PCT OF TOTAL	.75	.37	.75	3.37	11.61	16.85		
THEORET FREQ	2.53	2.36	5.22	10.28	24.61			
CELL CHI SQR	.11	.78	1.99	.16	1.66			
Total	15.00	14.00	31.00	61.00	146.00	267.00	3.16	1.17
PCT ACROSS	5.62	5.24	11.61	22.85	54.68	100.00		
PCT DOWN	100.00	100.00	100.00	100.00	100.00	100.00		
PCT OF TOTAL	5.62	5.24	11.61	22.85	54.68	100.00		
MEAN	1.13	1.07	1.06	1.15	1.21	1.17		
STD DEV	.35	.27	.25	.36	.41	.38		

CHI SQUARE = 5.658   DEGREES OF FREEDOM = 4

UNUSED = 0   UNDEFINED = 0

Note: This is a "sample" of the 448 tables obtained from the CD 3600
computer by Act II. The other 447 tables are preserved at the
office of Dr. Guy E. Timmons, Doctoral Committee Chairman.
These tables would be available to anyone who has further use
of the data.

APPENDIX G

APPENDIX G

CALENDAR OF THE PROJECT

September 17, 1963   Arrival at East Lansing, Michigan, U.S.A.

September 23, 1963   Admission at Michigan State University

December 20, 1963   Guidance Committee agreement to serve

May 13, 1964   Program developed and approved by Guidance Committee

December 24, 1964   Left East Lansing for field trip to East Pakistan

December 29, 1964   Reached Dacca, East Pakistan

February 9-11, 1965   Visit to Comilla, East Pakistan

February 18-21, 1965   Visit to Chittogong, East Pakistan

February 23-25, 1965   Visit to Sylhet, East Pakistan

February 27, 1965   Visit to Manikganj, East Pakistan

March 6-8, 1965   Visit to Comilla, East Pakistan

March 11-12, 1965   Visit to Ishurdi, East Pakistan

March 20, 1965   Left Dacca, East Pakistan

March 25, 1965   Reached East Lansing, Michigan, U.S.A.

April 30-May 5, 1965   Doctoral Comprehensive Examination

July 29, 1965   Doctoral Oral Examination

APPENDIX H

MEAN RESPONSES AND STANDARD DEVIATION OF MEAN RESPONSES
BY CONSULTANTS

	Mean	Standard Deviation		Mean	Standard Deviation
A13i	3.385	.836	G1	3.077	.730
A13ii	2.538	1.151	G2	3.385	.738
A13iii	1.077	.730	G3	2.769	1.049
A13iv	1.846	1.231	G4	2.769	.799
A13v	.923	.917	G5	2.923	.917
A13vi	.769	.697	G6	3.385	.625
A13vii	1.769	1.049	G7	3.231	.697
A13viii	3.154	1.099	G8	2.769	.576
A13ix	1.462	1.082	H1	3.308	.722
Ci	3.308	.722	H2	3.000	.877
C2	3.308	1.136	H3	2.846	.948
C3	3.385	.738	H4	2.385	1.077
C4	2.769	1.120	H5	2.923	.730
C5	3.308	.722	H6	3.000	.784
D1	3.615	.625	H8	2.846	.863
D2	3.154	1.099	H8	3.308	.722
D3	3.385	.836	H9	2.615	1.003
D4	2.846	.863	H10	2.846	.662
D5	3.231	..697	H11	2.308	.910
D6	3.692	.606	I1	3.077	.730
D7	3.538	.634	I2	3.308	..910
D8	3.769	.421	I3	3.231	.799
D9	3.462	.499	J1a	2.154	.948
D10	3.231	.576	J1b	2.000	1.109
D11	3.538	.499	J1c	1.308	1.202
D12	3.615	.487	J1d	1.692	1.066
D13	3.077	.615	J1e	1.385	1.332
D14	2.923	.730	J2	2.462	1.500
D15	3.538	.634	J3	3.154	.863
D16	3.308	..606	J4	2.923	.730
D17	3.231	.697	J5	3.077	.828
D18	3.308	.722	J6	2.154	.769
D19	3.231	.697	J7	3.000	.961
D20	3.231	.697	J8	2.385	1.003
E1	3.231	.799	J9	3.000	.877
E2	3.000	.679	K1	3.308	.722
E3	3.231	.697	K2	2.692	.821
E4	2.769	.799	K3	3.000	.961
E5	2.538	.843	L1	2.615	.836
E6	3.308	.821	L2	2.538	.499
F1	3.385	.625	L3	2.462	.843
F2	3.308	.722	L4	2.846	.863
F3	3.154	.769	L5	3.692	.462
F4	3.462	.634	L6	3.000	.784
F5	2.385	.625	L7	3.000	.784

	Mean	Standard Deviation		Mean	Standard Deviation
L8	3.462	.634	P1	3.462	.499
L9a	3.077	.917	P2	3.077	.730
L9b	3.231	.890	P3	2.538	.746
L9c	2.615	.738	P4	2.462	.843
L9d	3.000	.877	P5	2.769	1.120
L10	2.538	1.151	P6	2.462	.746
L11	1.308	1.323	P8	3.538	.634
L12	3.462	.746	P9	3.000	1.301
L13	2.692	.722	P10	1.923	1.206
M1	2.692	.722	P11	2.923	1.269
M2	2.154	.769	P12	2.462	1.082
M3	2.154	.769	P13	2.231	1.049
M4	1.692	.910	P14	2.538	.843
M5	2.308	.991	P15	3.154	.948
M6	2.615	.836	P16	3.154	.769
M7	3.077	.730	P17	3.231	.697
M8	2.923	.730	P18	3.615	.487
M9	1.538	.746	P19	2.846	1.231
M10	2.538	.843	P20	2.308	.991
M11	2.846	.662	P21	3.077	.615
M12	2.385	1.273	Q1a	3.154	1.026
M13	2.769	.890	Q1b	3.385	.923
M14	2.385	.836	Q1c	3.231	.973
M15	2.538	1.009	Q1d	2.846	.769
M16	2.538	.843	Q1e	2.692	.821
M17	1.538	1.009	Q1f	2.923	.615
M18	.692	.722	Q2a	3.154	1.026
M19	.846	.662	Q2b	3.308	.821
M20	2.077	1.141	Q2c	3.385	.738
M21	2.231	1.120	Q2d	2.692	.910
N1	2.923	1.206	Q2e	2.923	.997
N2	2.615	1.211	Q2f	2.769	1.250
N3	2.538	1.151	Q2g	3.154	.769
N4	2.462	1.082	Q3a	2.231	1.120
N5	2.692	1.202	Q3b	2.692	1.136
N6	3.000	1.177	Q3c	2.385	1.077
N7	2.538	1.082	Q3d	2.462	1.082
N8	2.154	1.167	Q3e	2.538	.929
N9	2.154	1.167	Q3f	2.538	1.009
O10	2.769	1.049	Q3g	2.000	1.414
O2	2.692	1.066	Q3h	1.846	1.026
O3	3.154	1.026	Q3i	1.385	.923
O4	2.769	1.187	Q3j	2.385	1.211
O5	2.615	1.003	Q4	3.231	.697
O6	1.231	.799	Q5	3.000	1.109
O7	1.538	.929	Q6	3.077	.828
O8	1.154	.863	Q7	3.154	1.099
O9	2.154	1.026	Q8	3.000	1.240
O10	2.385	1.003	Q9	2.923	.828
O11	2.231	1.049	Q10	3.154	.948
O12	3.077	1.071	Q11	3.000	.877
O13	1.769	.973	Q12	3.154	.863

	Mean	Standard Deviation
Q13	2.615	1.003
Q14	3.077	.917
Q15	2.846	1.099
Q16	3.231	.890
Q17	2.923	.730
Q18	2.615	1.003
Q19	3.154	.948
Q20	2.385	.836
Q21	2.615	.836
R1	3.462	.634
R2	3.769	.421
R3	3.846	.361
R4	3.692	.462
R5	3.538	.623
R6	2.923	.828
R7	3.462	.746
R8	3.231	.890
R9	3.231	.890
R10	2.846	.863
R11	3.615	.487
R12	3.077	.730
R13	3.846	.361
R14	3.923	.266
S1	2.462	.929
S2	2.615	.836
S3	2.692	.910
S4	2.615	.738
S5	3.154	.769
S6	1.769	1.187
S7	1.154	.769
S8	1.154	1.099
S9	1.308	1.066
S10	2.154	.769
S11	2.154	.662
S12a	1.077	1.071
S12b	1.385	1.443
S12c	1.615	1.389
S12d	2.308	1.488
S12e	2.846	1.292
S13	2.615	1.003
T1	4.538	.634
T2	4.385	.487
T3	4.000	.784
T4	3.538	.746
T5	3.692	.462
T6	3.769	.697
T7	2.154	.948
T8	4.615	.625
V1	4.000	.000
V2	3.857	.350
V3	4.000	.000
V4	3.818	.386