

*(AEPAM Report No.232)*

**Report of the workshop on**  
***Educational Research***  
**For**  
**Educational Managers, Planners and**  
**Research Scholars**  
*(June 22-27, 2009)*



**Compiled by**  
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**Academy of Educational Planning and Management**  
**Ministry of Education**  
**Islamabad**

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## PREFACE

The Scientific research in the field of education is a key for planners and policy makers because as it offers solutions to many problems which contribute in the improvement of education system. It is a fact that judgmental decision making can be effectively checked by research in the field of education. Research provides solutions to the problems. Keeping in view the importance of research, the management of Academy of Educational Planning and Management (AEPAM) organized one week training workshop from June 22-27, 2009.

The representatives of Ministry of Education, subordinate offices, autonomous bodies and Research Assistants from AEPAM participated in the workshop. My sincere thanks are due to all members of the Research Division for organizing this workshop. It is hoped that participants who attended the workshop will use the learnt skills in their professional work.

**(Prof. Dr. Haroona Jatol)**  
Director General



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## INTRODUCTION

Education is a social process and only source of human capital formulation which is pre-requisite for socio-economic development of the country. The emergence of globalization has increased competition in the world of work. Therefore, highly professional and skilled workforce is need of the development of a country in present era. Every government of any country around the world is making every possible effort to provide quality of education to their citizens. Recognizing the importance of education government of Pakistan has designed various National Education Policies so that access to education can be enhanced. However, Pakistan is still facing manifold problems. Policy makers and planners are struggling hard to overcome these problems but the scarcity of reliable information and other resource constrains are major hurdles in achieving desired result.

Research can be instrumental to solve these problems and suggests solutions of educational problems. This workshop was organized to provide professional skills to the officers of the Ministry of Education and its Allied departments so as to enable them to identify the problems and explore solutions on the basis of some empirical evidences.

### **Objectives of the Workshops**

The major objectives of the workshop were to:

- i. to highlight the importance of research as a tool for better decision making.
- ii. to introduce basic concepts of research.
- iii. to provide knowledge about methods of data collection, quantitative and qualitative data analysis and interpretation.
- iv. to analyze the findings of research in context of preparation of policy options.



The workshop was held at AEPAM and professionals from each Wing of the Ministry of Education and sub ordinate offices have participated.

The following themes topics were identified and presented by resource persons.

1. Importance of Research for Decision Making
2. Basic Concepts of Educational Research
3. Processes of Educational Research
4. Types of Research
5. Developing Framework of Research on the Basis of review of literature
6. Research for policy issues/options
7. Finalization of Research Topics
8. Review of Literature, Bibliography and Reference
9. Sampling Techniques
10. Preparation of Research Instruments
11. Methods of Data Collection
12. Concepts of Reliability and Validity
13. Analysis and Interpretation of Data
14. Library Research
15. Development of Research Proposal by the Participants
16. How to Draw Conclusions and Write Recommendations
17. Research Report Writing
18. Presentation by Participants

Schedule of the workshop (Appendix-2) and list of resource persons is placed at (Appendix-3). Background material of the presentations was provided to the participants. After each presentation, detail discussion and question answer section was held. The participants were divided into 10 groups. Each group was required to prepare research proposal on the assigned topic. Each group made presentations of their research proposal and



detail discussion was held by all of the participants. At the end of the workshop an evaluation was conducted. Evaluation form placed at (Appendix-11). Dr. Habib Khan, Ex-Director General of AEPAM was invited as Chief Guest for concluding session at the end of the workshop.

## INAUGURAL SESSION

Inaugural session of the workshop "Educational Research" took place in the Auditorium Hall of the Academy of Educational Planning and Management (AEPAM) on June 22, 2009. The inaugural session was started with recitation of the Holy Quran, and then the brief introduction of the participants was made with the Chief Guest. Khawaja Sabir Hussain, Deputy Director welcomed the Chief Guest Prof. Dr. Haroona Jatoi, Director General, AEPAM and participants of the workshop. He briefly described the objectives of the workshop and invited the Chief Guest to address the participants.

Prof. Dr. Haroona Jatoi, Director General (AEPAM) started her address with the name of Allah and thanked the nominating authority of the participants for their nomination in the workshop. She hoped that this exclusive workshop on "Educational Research" for officers of the Ministry of Education and sub-ordinate offices will enhance professional capabilities of the officers. She highlighted the importance of workshop and hoped that workshop would enhance the knowledge of the participants regarding research in the field of education. She also advised the head of Research Division and Course Coordinator to organize the workshop in effective and efficient manner. She stressed that active participation must be ensured for achieving the desired objectives. She was of the opinion that the workshop would be two-way learning process that contributes to solve the problems of education sector.

## PROCEEDINGS OF WORKSHOP (June 22, 2009)

### IMPORTANCE OF RESEARCH FOR DECISION MAKING

*Prof. Dr. Haroona Jatoi*  
Director General, AEPAM  
Islamabad

The first session of the workshop was taken by Prof. Dr. Haroona Jatoi, Director General, AEPAM. She explained the meaning of research to the participants of the workshop.

She was of the opinion that "research based information is more likely to define the problem carefully and to reflect the complexity of educational process". She further explained her point of view with example: "*if one plans to improve education, the first step is to have valid information and knowledge about education*". Therefore, research is essential for the educational planners and administrators to understand that "*how the research based findings are useful for decision making for dealing with the educational issues*".

While explaining the importance of research, she elaborated that "*the role of educators and the institutions is very important for rational decision making and research can contribute in this regard*". She further elaborated the importance of research as follows:

- Acquire a new or different perspective about education and educational processes which generate ideas on how to approach a practical problem.
- Use research findings for policy preparation and decision-making.

- Adopt those programs identified from research literature review which has more likelihood of producing desirable effects.
- Discriminate between educational claims by authorities and position papers of organized groups and those based on research.
- Identify an instructional or educational need systematically rather than intuitively.
- Test an assumption or a hypothesis deduced from a theory or a claim to provide more reliable knowledge and implications for educational practice.

She elaborated these points and answered the questions of the participants.

### **Selection of a Problem Area**

Dr. Haroona Jatoi emphasized that the participants should select the research problem for designing research proposal in the workshop. She defined the problem areas of education in which research would be conducted, such as "instruction, administration, adult education, or special education and teacher education etc".

### **Literature Review**

She explained that the most important task in research is to review the literature related to the problem under consideration. In some studies, an exhaustive literature review is done before the data is collected. In other studies, the literature review is tentative and preliminary before data collection and than expanded as data is collected". This situation leads towards weak foundation of research. Whenever, researcher review literature extensively, this provides a strong foundation for research. She advised the participants "to have a review of literature at the time of designing proposals".

### **Select the Specific Research Problem, Question or Hypothesis**

It is very important for research that specific research problem should be defined with clear research questions and hypothesis so that the solution of the problem can be found on the basis of empirical data. She highlighted that "this requires the researcher to decide about the methodology, specifically whether quantitative or qualitative methodology will be used".

### **Data Collection**

Data collection is an important step in the research. Therefore, she explained the moral and ethical obligation of the researcher in these words; "ethical and legal concerns regarding data collection and analysis must also be resolved. Research should have proper skill for proper citation".

### **Analyze and Present or Display Data**

Analysis and interpretation of data is a skill that is why she emphasized that participants while analyzing the data of their research, it should be in presentable form and very clearly interfaced with the objectives of the study. She was of the opinion that "Interpretation of data should be made in such a manner which guides the researcher to write findings and draw conclusions".

At the end of her lecture she raised various questions and tried to get answers of the questions from the participants.



## RESEARCH FOR POLICY ISSUES/OPTIONS

*Mr. T.M. Qureshi*

Deputy Educational Advisor,  
(P & P Wing), M/o Education

The second session of the workshop was taken by Mr. T.M. Qureshi, Deputy Educational Advisor. He started his lecture by explaining process of National Education Policy 2009. He highlighted the approaches that had been adopted for designing National Education Policy 2009. He was of the opinion that policy formulation process consisted on three stages i.e. diagnostic, prescriptive and policy development stage. He elaborated the stages of policy formulation as follows:

- A. Diagnostic
  - Literature Review
  - Green Papers
  - Research studies
  - District consultations
  - Education Conferences
  
- B. Prescriptive
  - Issue-based consultations
  - Consultations held with key Organizations
  - Coordination with Development Partners
  - Thematic Papers
  
- C. Policy Development
  - White Paper
  - Policy Document
  - Strategies/Implementation Plans

He further informed the participants that various papers had been designed for getting the opinion of the general masses so as to ensure the participation of all stakeholders. He defined following Green Papers that had been designed to share with all concerned stakeholders.

- Vision and Objectives

- Access
- Assessments
- Defining Quality Education
- Early Childhood Education
- Primary Education
- Education Financing
- Education Statistics
- Education in Emergencies
- Equity in Education
- Gender and Education
- Higher Education
- ICT & Education
- Inter Tier Responsibilities
- Literacy and NFE
- Private Sector in Education
- Science Education
- School Management
- School Environment
- Secondary Education
- Sector Planning and Management
- Teachers (Training and Accreditation)
- Textbooks and Learnin

### **Involvement of Stakeholders**

It is a fact that policy formulation is very complicated and difficult process which demands the involvement of all the stakeholders at the formulation stage. Consequently implementation of policy is ensured. The honorable resource person explained the following stakeholders who had been involved at the policy formulation stage.

- The provincial Education Ministers and Education Secretaries
- Other officers of the provincial Education Departments
- Higher Education Commission
- Officials of the Ministry of Education



- Donors working in the education sector
- Nazims and EDOs (Education)
- Officials involved in Teacher Training
- Experts/Academicians
- Senate/ National Assembly Standing Committees on Education
- Representatives of Madrassahs
- Sample of Teachers from each province and area
- Samples of Parents and Students from each province and area
- School Management Committees/Parent Teachers Association
- Teachers and Managers of Higher Education Institutions
- Eminent educationists including in-country and international specialists in the education sector
- Civil Service personnel
- Civil Society Organizations (CSOs)
- Journalists
- All Pakistan Association of Private Schools
- Officials, Teachers and Students of private schools
- Private Schools: *For Technical and Vocational Education;*
- Federation of Pakistan Chambers of Commerce and Industries (Standing Committees on Education)
- Chambers of Commerce and Industries (Federal and Regional representatives)
- Key personnel working at NAVTEC, NISTE, TEVTA and other Federal and provincial organizations looking at TVE
- Teachers and students of selected institutions of TVE Institutions
- Civil Society Organizations involved in vocational training

### **Policy Issues /Options**

Mr. Qureshi also explained the salient features of National Education Policy 2009 and various proposed policy actions. However, he confined himself about the policy issues and emphasised on the participants to select research topics for designing research proposals in the workshop. Resource person

identified three broad areas i.e. governance, National Standards

and Structural Division. He pointed out various options which are to be addressed in proper manner.

**a. Governance**

- Lack of clarity in inter-tier roles and responsibilities
- Federal-Provincial
- Provincial-District
- Fragmentation of education management and governance
- Separate entities for higher education, school education, literacy & Non Formal Education (NFE), technical education and vocational training etc
- No formal coordination mechanism exists.

Resource person explained all these issues in detail and invited the participants to design research proposals.

**b. National Standards**

It is a fact that no national standards have been determined so far in Pakistan. Mr. Qureshi highlighted this issue with the help of the following points.

- Absence of clearly articulated standards for most educational inputs, processes, outputs and outcomes
- Non availability of performance indicators
- Weak monitoring and evaluation

He was of the opinion that we should have some standards, in our system so as categorization of the sub-sectors and location wise can be made.

**c. Structural Division**

There are several discriminatory systems in education which is a cause of dissatisfaction among masses. He was of the opinion that, "the challenge of ensuring a uniform system of

education that provides level playing field for the children irrespective of their caste, creed, family's economic capacity and religion, and in line with the Fundamental Rights and Principles of Policy as enshrined in the Constitution of Pakistan needs to be addressed immediately".

At the end of the lecture he invited questions from the participants and very briefly answered the questions. He left the hall with thanks.



## PROCESSES OF EDUCATIONAL RESEARCH

*Ms. Khush Baksh Hina*  
Lecturer, NUML University  
Islamabad

The last session of the day was taken by Ms. Khush Baksh Hina, Lecturer, National University of Modern Languages. She started her lecture with the definition of research. She elaborated research as, *"the systematic process of collecting and analyzing information (data) in order to increase our understanding of the phenomenon about which we are concerned or interested."* She analyzed this definition very beautifully, so as interest can be developed among the participants.

### **Research begins with a problem**

She further stated that, "research begins with a problem, this problem needs not be Earth-shaking, to identify this problem can actually be the hardest part of research and in general, good research projects should be cleared". Consequently advance of knowledge is taken placed.

### **Research Proposal**

While defining the research proposal, the resource person was of the opinion that *"research proposals are documents that describe the intended research including, Problem and sub-problems, hypotheses, delimitations, definitions, assumptions, importance and literature review"*.

She further elaborated that researcher should take decision about the topic which should be based on the previous readings and review of literature. She explained that how decision can be taken about the research topic. She stated the strategies in these words *"Plan your library trip, bring all the course readings, you don't want to pursue a topic over which*

*little scholarship has been written, nor do you want a topic:*

*which are sparse and Begin with a broad sweep*. In fact she tried to motivate the participants that research proposal should be designed on the basis provided by review of literature.

At the end of the lecture, she addressed some questions raised by the participants and the lecture was end with thanks.

## PROCEEDINGS OF WORKSHOP (June 23, 2009)

### TYPES OF RESEARCH

*Dr. Manzoor Hussain Shah*  
Assistant Professor, AIOU

The first session of the day was started at 8:30 am. The resource person was Dr. Manzoor Hussain Shah. He started his lecture with the definition of research. He quoted J.W. Best, "research is formal systematic and intensive process of carrying on the scientific method of analysis". He further explained that the research is "careful search or inquiry and to discover new facts". He invited some of the participants to define the research in their own words. At this stage several questions were asked by the participants which were addressed by the resource person.

This was recapitulation of the previous knowledge of the participants. He asked the participants to remember the concept and definition of research.

#### **Types of Research by Purpose**

He explained that research can be categorized by purpose and method. He defined types of research as under:

- i. Basis Research/Pure Research/Fundamental
- ii. Applied Research/Field Research
- iii. Action Research

#### **Types of Research by Method**

- i. Experimental Research
- ii. Descriptive Research
- iii. Historical Research

## **Experimental Research**

The honorable resource person elaborated the further steps which are to be taken for conducting different kinds of research. He explained the components of experimental research i.e. Experimental Group and Controlled Group. He also defined the variables of experimental study; "Independent variables, Dependent variables, Intervening variables and extraneous variables".

## **Descriptive Research**

Descriptive research is an important type of research. He stated that descriptive study can be further categorized such as; "School Survey, Public opinion survey, Community survey, Documentary Analysis, Job Analysis and Follow up study".

He further explained that relationship studies are also conducted such as "Case study, Causal comparative study and Co-relational studies. While answering the questions of the participants the resource person described the developmental studies "Growth studies, longitudinal method, Cross sectional method and Trend projection studies".

## **Historical Research**

The resource person also defined historical research with the emphases that historical research can be conducted either with primary source of data or secondary source". However, "internal criticism and external criticism about the sources of data" is pre-requisite for conducting historical research.

Resource person highlighted the important points of his lecture and invited the participants for asking questions. The participants took the benefits of this opportunity and started raising various questions, which were addressed by the resource person. The lecture was ended with the thanks by the resource person.



## DEVELOPING FRAMEWORK OF RESEARCH ON THE BASIS OF LITERATURE

*Dr. Hamid Niazi*

Associate Professor, AIOU

The second session was taken by Dr. Hamid Niazi, Associate Professor, AIOU. He started his lecture by explaining the concept of conceptual framework. He was of the opinion that "conceptual frameworks (theoretical framework) is a type of intermediate theory that have the potential to connect to all aspects of inquiry (e.g., problem definition, purpose, literature review, methodology, data collection and analysis). Conceptual framework acts like maps that give coherence to empirical inquiry". He explained that conceptual framework elaborated the problem, purpose and methodology of the research.

While explaining the importance of conceptual frameworks, he quoted the work of Shields and Tajalli (2006) regarding conceptual framework such as "working hypothesis, descriptive categories, practical ideal type, models of operations research and formal hypothesis for the field of public administration. The frameworks are linked to particular research purposes (exploration, description, gauging, decision making and explanation/prediction)". He further elaborated the conceptual framework help the research in establishing linkages between the explanation and facts.

As far as purpose of framework is concerned he explained that "framework, is aligned with other aspects of empirical research such as choice of methodology (survey, interviews, analysis of existing data, direct observation, focus group etc) and type of statistical technique become obvious". By explaining these words, he was of the opinion that conceptual framework provides complete guide for conducting research. The whole methodology was elaborated at this stage.

## Problems in the Development of Framework

The resource person very clearly elaborated the problems which are being faced by the researcher while developing the conceptual framework. He was of the opinion that "a research study starts with a problem that is determined within broad area of interest". He further explained the following points.

- Indication of something hidden that might be revealed by study
- The occurrence of an event for which there is no adequate explanation
- An apparent relationship between items which is not explained by current theories

The resource person was of the opinion that researcher faces problems at this stage, but conceptual framework is the best solution of all these problems. Hence, necessary condition is review of literature.

### Research Questions for Conceptual Framework

Dr. Hamid Niazi elaborated that the next stage is to formulate the research questions. This creates focus and may require a significant thinking down of the original problem. "If the problem starts out as being about life, the universe and everything, then perhaps the research question should realistically be constrained to furthering understanding of some aspect of life, such as determining the first stirring of a fruit fly's egg or the value put on life by people of different ages". Dr. Niazi emphasized that research questions should be designed considering the area of research by adopting convergent approach.

## **Hypothesis and Design of the Study**

Conceptual framework provides guidance for developing the hypothesis and design of the study. Dr. Niazi stated that "hypothesis involves converting the question into a predictive form and also creating a null hypothesis by which falsification may be achieved".

As far as design of the study is concerned the honorable resource person explained that "the purpose of the design is thus to determine a method which creates accurate and unbiased data from which valid conclusions may be drawn. This includes determining that how experiment closure will be achieved".

Experimental design has also be explained by the resource person. He was of the opinion that "experimental design is to ensure that all variables other than those of interest are held stable and do not distort the results. One way of doing this is to include a control group, in which the experiment is repeated under the same conditions but without manipulating the independent variable".

The participants of the workshop asked several questions which were answered by the resource person and lecture was ended with thanks.



## BASIC CONCEPT OF SCIENTIFIC RESEARCH

*Khawaja Sabir Hussain*

D. D. (Head: Res. Div)

AEPAM

The third session was taken by Khawaja Sabir Hussain, Deputy Director. He started his lecture with the following definition of research.

- Research is a careful, systematic and patient process of inquiry, using scientific methods to solve problem or establish facts and relationship.
- Research is considered to be more formal, systematic and intensive process of carrying out scientific method of analysis. It involves a more systematic structure of investigation, usually resulting in some sort of formal record of procedures and a report of result or conclusions. (John, W. Best)
- Research is a systematic and objective way of inquiry by using proper instruments and scientific procedure for seeking facts and analysis that may lead to the development of generalizations, improvements, solve problems, prediction and control of events.

He explained all these definitions in detail. He further critically analyzed these definitions and emphasized on the participants to define research in their own words. He motivated every individual to describe research and majority of the participants defined the research in their own words.

### **Research Emphasized on the Reflective thinking**

While explaining the steps in the research, he elaborated the following steps which are being taken by the researchers. He

highlighted the importance of research and its steps with the help

of following points:

- o The occurrence of a felt difficulty
- o Identification and definition of the problem
- o Suggested solutions of the problem or hypotheses
- o Deriving consequences of the suggested solutions with the help of deductive reasoning
- o Experimental verification of the hypothesis
- o Identification and definition of the problem
- o Formulation of hypothesis
- o Implication of hypothesis through deductive reasoning
- o Collection, organization and analysis of evidence/data
- o Verification, rejection or modification of hypothesis

### **Scientific Method**

The resource person explained the scientific method by given various examples of the research study, which had been conducted by AEPAM. He further stated that scientific method of research consisted on following steps:

- o Identification of the problem
- o Definition of the problem
- o Formulation of hypothesis-a possible answer to the question
- o Collection, organization and analysis of data
- o Formulation of conclusions
- o Verification, rejection or modification of the hypothesis by the test of its consequences in a specific situation.

He explained all these above-mentioned steps of scientific method with examples. The participants of the workshop asked various questions which were answered by the resource person. It is pertinent to mentioned here that the resource person was of the opinion that there are no hard and fast

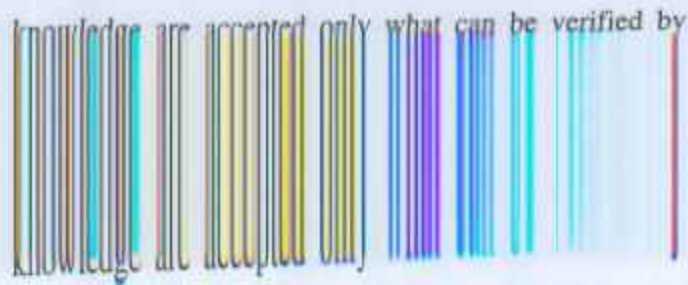
rule to follow strictly these steps. But generally these steps are being followed around the world while conducting research in the field of research.

### **Characteristics of Educational Research**

Good research has some fundamental characteristics which contribute toward the quality of research. Therefore, resource person explained the following characteristics of educational research.

- i. Research involves the quest for answers to unsolved problems. Pushing back the frontiers of ignorance is its goal, and originality is frequently the quality of a good research.
- ii. Research is carefully recorded and reported. Each important term is defined, limiting factors are recognized, procedures are described in detail, references are carefully documented, results are objectively recorded and conclusions are presented with scholarly caution and restraint.
- iii. Research is directed towards the solution of a problem. The ultimate goal is to discover cause-and-effect relationships between variables
- iv. Research emphasizes the development of generalizations, principles or theories that will be helpful in predicting future occurrences. Research usually goes beyond the specific objects, groups or a situation investigated and infers characteristics of a target population from the sample observed.
- v. Research is based upon observable experience or empirical evidence because research procedure rejects revelation and dogma as methods of establishing

Knowledge are accentuated only what can be verified by



observation.

- vi. Research demands accurate observation and description. Researchers may choose to use quantitative measuring devices when possible. When this is not appropriate to answer the researchers' question, they may choose from a variety of qualitative or non-quantitative procedures. Good research utilizes valid and reliable data gathering procedures.
- vii. Research requires expertise. The researcher knows what is already known about the problem and how others have investigated it as well as familiar with terminology, concepts, and technical skills necessary to understand and analyze the data gathered.
- viii. Research strives to be objective and logical. The researcher applies every possible test to validate the procedures employed, the data collected, and the conclusions reached. The emphasis is on testing rather than on proving the hypothesis. Although, absolute objectivity is as elusive as pure righteousness, the researcher tries to suppress bias and emotion in his or her analysis.

### Functions of Research in Education

Resource person explained five major functions of research in the field of education. He was of the opinion that research not only provides solution of the problem but also help in rationale decision making on the basis of some empirical evidences. He highlighted the functions as follows:

**Exploration:** This is done when Researcher are trying to generate ideas about something.



**Description:** This is done when Researcher want to describe the characteristics of something or some phenomenon.

**Explanation:** This is done when Researcher want to show how and why a phenomenon operates as it does. If you are interested in causality. You are usually interested in explanation.

**Predication:** When Researcher primary interest is in making accurate predictions. Note that the advanced sciences make much more accurate predictions than the newer social and behavioral sciences.

**Influence:** This objective is a little different. It involves the application of research result. A demonstration program is an example of this.

At the end of the lecture resource person invited questions from the participants which were answered to the entire satisfaction of the participants. The lecture was ended with thanks.



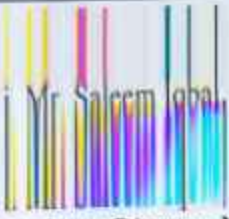
## FINALIZATION OF RESEARCH TOPICS FOR DESIGNING RESEARCH PROPOSALS

*Khawaja Sabir Hussain*  
D.D. (Head: Res. Div.), AEPAM

*Mr. Asif Hussain*  
Research Officer, AEPAM

The last session was reserved to finalize the research topics for designing research proposals during the workshop. There were variety of participants with different educational qualification and professional experience. Some participants had a lot of experience in their credit, whereas, some participants were junior. Therefore, a strategy was adopted that ten groups were made by including one senior and one junior participant and one research topic was assigned to two participants. All the participants were allotted research topic and they were supposed to develop research proposals under the supervision of Deputy Director (Research), AEPAM. Detail of research topics and name of the participants are given in the following table.

| S.# | Name & Address   | Research Topics   |
|-----|--|---|
| 1.  | i. Mr. Jamil Ahmad Hashmi<br>Deputy Educational<br>Advisor, Ministry of<br>Education, (Curriculum<br>Wing)<br><br>ii. Miss Sana Safdar<br>Internee AEPAM | Explore the Reasons of Low<br>Quality of Text Books in<br>Pakistan at Primary Level |
| 2.  | i. Mr. Ali Hyder Bhutto,<br>Assistant Director, National<br>Book Foundation, Ministry<br>of Education<br><br>ii. Imran Hyder Internee                    | Critical Analysis of<br>Availability of Physical<br>Facilities at Primary Level     |

|    |  |   |
|----|--|---|
| 3. |  <p>Mr. Saqib Qureshi<br/>Assistant Director, National Book Foundation, Ministry of Education</p> <p>ii. Mr. Muhammad Sarwar, Research Officer, Federal Board of Intermediate and Secondary Education</p> | <p>Role of Multiple Textbooks at Secondary Level for Elimination of Memorization /rote-learning</p> |
| 4. | <p>i. Mr. Muhammad Kamran, Training Officer, National Institute of Science and Technical Education</p> <p>ii. Muhammad Inamullah Internee AEPAM</p>  | <p>Study on science teachers pedagogical content knowledge at Secondary Level</p>                   |
| 5. | <p>i. Mst. Tahira Abdullah, Research Officer, National Institute of Science and Technical Education (N.I.S.T.E.)</p> <p>ii. Miss Misbah Karim Internee AEPAM</p>   | <p>Impact of Teaching Style on the Performance of the Students</p>                                  |
| 6. | <p>i. Mr. Farooq Aizam Abro, Assistant Educational Advisor, Ministry of Education, P &amp; P Wing</p> <p>ii. Mr. Shenshah Babur Khan, Lecturer, PAEC College Nelore. (M.Phil scholar)</p>  | <p>Development Of Methodology To Make Mathematics As Student Friendly Subject</p>                   |
| 7. | <p>i. M. Abdul Razaq Bhutto, Assistant Educational Advisor, Ministry of Education, P &amp; P Wing</p> <p>ii. Muhammad Sohail</p>   | <p>Impact of Quality Education in Enhancing Efficiency of Educational Administration</p>            |

|     |   |   |
|-----|---|---|
| 8.  | i. Mr. Mirza Ali, Assistant Controller of Examinations (HSSC-Secrecy), Federal Board of Intermediate and Secondary Education<br><br>ii. Muhammad Fazl-u-Rehman Assistant, AEPAM | Development of the Methodology to Cover the Entire Curriculum Through Exams at Secondary School Certificate Level |
| 9.  | i. Mr. Asif Sohail, DEA/JD, Ministry of Education, Projects Wing<br><br>ii. Miss Tayyba Azhar Internee AEPAM  | Evaluation of Punjab School Library Project   |
| 10. | i. Miss Shafia Parveen, Assistant Field Officer (PE), National Education Foundation<br><br>ii. Mr. Imran-u-Haq, Assistant Director (PE), National Education Foundation          | An Investigation of Causes of Dropout rate Basic Education Community School (BECS) Project                        |

These research topics were chosen with the consent of the participants related with their departments. This session was also ended with thanks.



**PROCEEDINGS OF WORKSHOP  
(June 24, 2009)**

**REVIEW OF LITERATURE, BIBLIOGRAPHY  
AND REFERENCE**

*Khawaja Sabir Hussain*

D. D. (Head: Res. Div)  
AEPAM, Islamabad

The first session was taken by Khawaja Sabir Hussain, Deputy Director (Research). He started his lecture with the definition of literature review in research. He explained that "in research methodology, the term literature refers to the status of knowledge relating to a particular area of investigation which includes theoretical, and research studies to be used as base for building knowledge".

The resource person further elaborated the literature review and said that "the term 'review' means to organize the knowledge of the specific area of research to ensure that no important information is left unattended. He was of the view that "the task to review literature is highly essential because the researcher synthesizes the available knowledge of the field with a special reference to area of interest".

The resource person also quoted definition of eminent research scholar of the world:

W. R. Borg: "The literature in any field forms the foundation upon which all future work will be built. If we fail to build the foundation of knowledge provided by the review of literature, our work is likely to be shallow and naïve and will often duplicate work that has already been done better by some one else.

Charter V. Good: "The keys to the vast storehouse of published literature may open doors to sources of significant problems and explanatory hypotheses and provide helpful orientation for definition of the problem, background for selection of procedure, and comparative data for interpretation of results. In order to be creative and original, one must read extensively and critically as a stimulus to thinking."

### Objectives of Literature Review

The resource person highlighted the following objectives of literature review while conducting research in the field of education.

- It provides theories, ideas, explanations or hypotheses that may prove useful in the formulation of a new problem.
- It indicates whether the evidence already available solves the problem adequately without requiring further investigation. It avoids the replication.
- It provides the sources for hypotheses. The researcher can formulate research hypotheses on the basis of available studies
- It suggests method, procedure, sources of data and statistical techniques appropriate to the solution of the problem.
- It locates comparative data and findings useful in the interpretation and discussion of results. The conclusions drawn in the related studies may be



significantly compared and may be used as the reference for the findings of the study

- It helps in developing experts and general scholarship of the investigator in the area investigated.

### **Procedure for Conducting Literature Review**

It is very important that researcher should have knowledge about the method and procedure of literature review therefore, resource person explained the procedure of literature review; "the documentation of the relevant published and unpublished material citing authors and year is a literature review or literature survey. The literature review introduces the subject of study, why it is important topic, highlights the problem and summarizes the work done in the area of interest along with registering aspects, which require attention in order to understand the concept. It facilitates researcher to develop framework as to what are the major elements of the problem and factors that influence".

He elaborated that "frame of reference of literature review revolves around the specific issues and identified variables of the problem of interest. He further emphasized that the process of literature review consists of three major steps: "Identifying various published and unpublished material on the topic of interest. Relevant information can be collected from libraries. Moreover access to online sources and other sources can also be used for literature review". He emphasized on the participants to follow these steps while conducting research.

## Major Sources of Literature

The resource person pointed out the following main sources of literature review:

- Books and Text Books
- Periodicals, journals, magazines
- Abstracts
- Private and public documents
- Encyclopedias
- Handbooks, Yearbooks and Guides
- Conference proceedings and reports
- Specialized Dictionaries
- ERIC (Educational Research Information Centre)
- Dissertations and Thesis
- Newspaper
- Websites
- National Databank on Education (AEPAM)
- Unpublished material

Resource person was of the view that this is not an exhaustive list of sources of literature review, there are many other which can be explored. However, it depends on the individual researcher who has to consider time and resources available for this purpose.

### Citing Different Types of Literature

Participants raised question that how citation could be made. It was relevant question that how to give reference in the research at literature review stage. Therefore, the resource person was of the opinion that “normally two terms are in use for the citation of literature- bibliography and references. He explained difference between bibliography and reference. He stated that “Bibliography is the listing of the published and unpublished work that is relevant to the problem of research and it is presented in alphabetical order”. Whereas, “Reference list is a

subset of bibliography, which includes all citations used in the literature review”.

He further stated that “these citations are written in alphabetical order using first name of the authors. It enables readers to find the work cited. There are three styles of citing literature; format of American Psychological Association (APA), Chicago Manual style and Turabian style”. However, the most popular style around the world is APA.

Several questions at the end of the lecture were addressed by the resource person and lecture was ended with thanks.



## SAMPLING TECHNIQUES

*Malik Mushtaq Ahmad*

Vice Principal, IMCB,

F-8, Islamabad

The second session was taken by Malik Mushtaq Ahmad, Vice Principal. He started his lecture by defining the population and size of population.

### **Population**

Population is the group of interest to the researcher, the group to whom the researcher would like to generalize the results of the study. The resource person was of the opinion that "the individual members of the population are called units, on the basis of units the population is called finite or infinite, population having countable numbers of units is called finite or discrete and having uncountable number of units is called infinite population or continuous population".

### **Size of the Population**

As far as size of the population is concerned the resource person elaborated that "total number of units in a finite population is called the size of the population". However, it is pertinent to mentioned here that population can be of any size but must have one characteristic that the individuals included in the population must be of same certain characteristic.

### **Sampling Techniques**

While explaining the sampling techniques resource person explained that "sampling is the process by which a relatively small number of individuals or measures of individuals, objects or events are selected and analyzed in order to find out something about the entire population from which it was selected".

In fact sampling is a statistical technique which is used in order to collect information about the characteristic of a population. He explained that "a sample is a group or individuals selected from a population on which information is obtained".

### **Purposes of Sampling**

The resource person described purpose of sampling in the following words.

1. To provide sufficient information about the characteristics of a population without examining every unit of the population.
2. To find the reliability of the estimates derived from the sample.

### **Types of Sampling**

The honorable resource person elaborated the following sampling techniques:

#### **i. Purposive Sampling**

He was of the opinion that "purposive sampling is non-random sampling in which the selection of the sampling units is based on a person's expertise about the population. It is liable to be biased by introducing the deliberate subjective choice of the person who selects the sample". He further explained that "it is not based on probability theory, there is no objective method for measuring the reliability of the sample results".

## ii. Quota Sampling

The resource person explained quota sampling that "it is sampling, usually of human beings, in which the information is collected purposively from the segments of a population (the quotas) Quota sampling may be considered as stratified sampling in which the selection of units within a strata is non-random". Hence, "it is cheaper and administratively a very quick form of investigation. He further highlighted that "it is widely used in public opinion polls and market research surveys".

## iii. Random Sampling

He explained random sampling in these words and said "it is also called probability sampling. When each unit in a population has a known non-zero probability of its being included in the sample, it is called random or probability sampling. Its major type is simple random sampling, stratified random sampling, systematic sampling, cluster sampling and systematic sampling".

## iv. Simple Random Sampling

While defining simple random sampling he stated that "it is the process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of being selected for the sample".

He further explained that "it is the best single way to obtain a representative sample. Its probability is higher than any other technique".

## v. Stratified Sampling

As far as stratified sampling is concerned, he stated that "it is the process of selecting a sample in such a way that identified subgroups in the population they are represented in the sample in the same proportion that they exist in the population. It can also

be used to select equal sized samples from each of a number of

subgroups if subgroup comparisons are desired".

He further said that "purpose of stratified sampling is to guarantee the desired representation of relevant subgroups".

#### vi. Cluster Sampling

Resource person highlighted that "cluster sampling is a sampling in which groups, not individuals, are selected. All the members of selected groups have similar characteristics". Hence, he further stated that "cluster sampling is more convenient when the population is very large or spread out over a wide geographic area. It involves usually less time, less expense and is generally more convenient".

#### vii. Systematic Sampling

Resource person explained systematic sampling as under:

- In systematic sampling individuals are selected from a list by taking every Kth name. What's a Kth name? That depends on what K is. If  $K = 4$  selection involves every 4th name. Value of K depends on the size of the list and the desired sample size.
- Once the first name is selected all the rest of the individuals to be included in the sample are automatically determined. Systematic sampling can be considered a random sample only if the list of the population is randomly ordered. One or the other has to be random either the selection process or the list.

At the end of the lecture participants raised some questions. Resource person answered and lecture was ended with thanks.



## PREPARATION OF RESEARCH INSTRUMENTS

*Ms. Surayia*  
Vice Principal,  
Nelore Model College

The honorable resource person started her lecture by explaining the meaning of research instrument. She was of the opinion that "the instruments that are employed to gather new facts or to explore new fields are called "TOOLS". It is of vital importance to select suitable instruments or tools".

### **Types of Research Tools**

There are several types of research instruments however, resource person explained the following types of research instruments.

#### **i. Questionnaire**

She explained that questionnaire is a "device for getting answers to questions by using a form which the respondent fills in him".

#### **ii. Interview Schedule**

The resource person explained the interview schedule "a set of questions ask and filled in a face to face relationship". She further described the advantages of interview "as interview establishes rapport with respondent because the purpose of study is explained. In this way face to face interaction can be made while conducting interview.

#### **iii. Attitude Scale**

She further explained the attitude scales which are used for data collection usually in descriptive research. She defined "a type of inquiry form: measures the attitude or belief of individual

of individuals towards a phenomenon". She also highlighted the guideline for making attitude scales in the following words.

- Survey of available literature on the subject
- List of statements prepared for measuring attitude by other researches
- Various individuals be requested to express the opinion
- Favourable and unfavourable statements be collected
- A large number of statements be selected

At the end of the lecture some questions were raised which were answered. Lecture was also ended with thanks.

## METHOD OF DATA COLLECTION

*Dr. Sabir Hussain Raja*  
Assistant Professor, AIOU  
Islamabad

### Data Collection

The last session of the day was taken by Dr. Sabir Hussain Raja, Assistant Professor. He started his lecture by defining data collection. He was of the opinion that "data collection is one of the important steps in the research process particularly if research design is indicated earlier. Data is collected in variety of ways such as; questionnaires, interviews, observations, tests, secondary sources, etc. The validity of the research depends upon the accuracy of the data collected corresponding to purpose of the study. The accuracy of data depends upon the reliability of tools and techniques used for the purpose. All research studies are designed either to test the hypothesis or find solution to the problem and answer to the research questions".

It is important that various methods can be used for data collection in various types of research. Therefore, resource person explained each and every method of data collection separately for historical research, descriptive research and experimental research. Detail is as under:

#### 1. Historical Research

The resource person explained historical research in these words "Historical research is the systematic collection and objective evaluation of data related to past occurrences in order to test hypotheses concerning causes, effects or trends of these events that may help to explain present events and anticipate future events".

## Method of Data Collection

There are several method of data collection which can be used in the historical research. The resource person explained these methods in the following:

- o In a historical research study, the review of related literature and study procedures are part of the same process.
- o The term "literature" takes on a much broader meaning in a historical study and refers to all sorts of written communication; in addition, identification, acquisition, and review of such "literature" is considerably more complex.
- o The written communication may be in the form of legal documents, records, minutes of meetings, letters, and other documents which will not normally be indexed alphabetically by subject, author and title in a library.
- o A historical research study in education may also involve interviews with persons who participated in the event or process under investigation, if it occurred in the recent past.
- o Primary sources constitute firsthand information, such as original documents and reports by actual participants or direct observers; secondary sources constitute secondhand information, such as reference books or reports by relatives of actual participants or observers.
- o A common criticism of historical research is excessive reliance on secondary sources.

### 2. Descriptive Research

The resource person stated that "descriptive research involves collecting data in order to test hypotheses or to answer questions concerning the current status of the subject or the study".

### **Method of Data Collection**

The resource person was of the opinion that various method including questionnaires, interviews, and attitude scales can be used for data collection. In some cases observation can also be used.

### **3. Experimental Research**

Dr. Sabir Hussain Raja stated that in experimental research “the researcher manipulates at least one independent variable, controls other relevant variables, and observes the effect on one or more dependent variables”. He was of the opinion that in experimental research usually questionnaire is used.

The resource person invited questions by the participants which were answered and lecture was ended with thanks.



## PROCEEDINGS OF WORKSHOP (June 25, 2009)

### CONCEPT OF VALIDITY AND RELIABILITY

*Malik Mushtaq Ahmad*  
Vice Principal, IMCB,  
F-8, Islamabad

The first session of the day was taken by Malik Mushtaq Ahmad on Concept of Validity and Reliability. He defined concept of validity in the following words:

- validity depends on the Purpose
- Measuring what 'it' is supposed to
- Matter of degree (how valid?)
- Specific to a particular purpose!
- Must be inferred from evidence; cannot be directly measured

#### **Types of validity measures**

The resource person also defined the types of validity as follow:

- Face validity
- Construct validity
- Content validity
- Criterion validity
  1. Predictive
  2. Concurrent
- Consequences validity

He further explained the concept of reliability. He stated that "Consistency in the type of result a test yields, not perfectly

similar result but 'very close-to' being similar, when someone

says you are a 'reliable' person, what do they really mean and are you a reliable person?".

He further clarified the following concepts related to reliability.

- i. Internal consistency reliability
- ii. Inter-observer reliability
- iii. Importance of reliability
- iv. Sources of measurement error in test construction
- v. Sources of measurement error associated with the person taking the test

At the end of the lecture the resource person thanks the participants.



# DATA ANALYSIS AND ITS INTERPRETATION

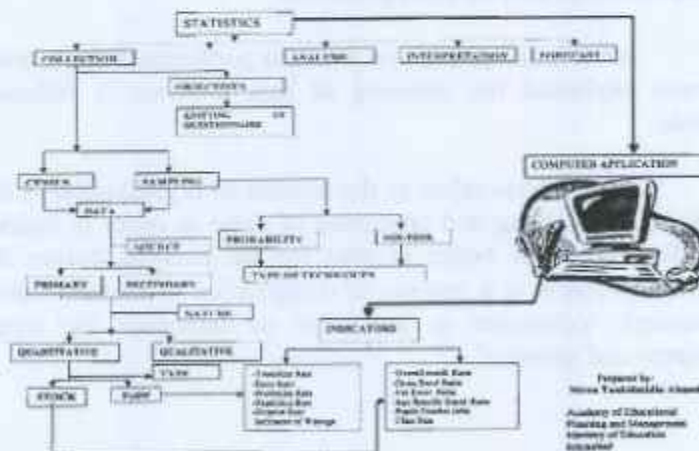
*Mirza Tauhiduddin Ahmed*

Program Manager,  
P & P Wing, Islamabad

The second and third sessions were taken by Mirza Taudidudin, Program Managers on data analysis and its interpretation. He explained the following concepts before taking detail discussion on the analysis. The important concepts which he highlighted were as under:

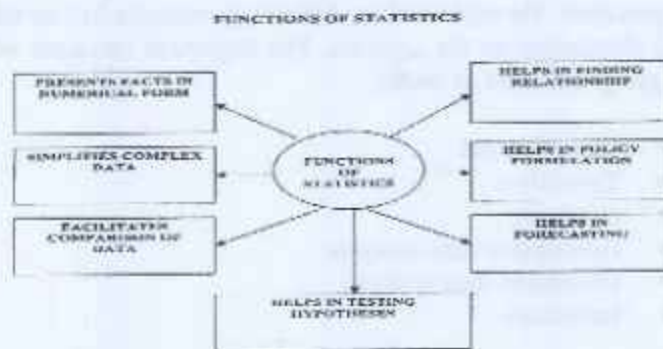
- Classification
- Tabulation
- Graphing
- Descriptive data analysis
- Inferential data analysis
- Indicators

He further elaborated these concepts with the help of following diagram:



He explained all these concepts with detail while delivering his lecture.

Mirza Tauhidudin also described the functions of statistics with the help of following figure.



### **Data Analysis and its Interpretation**

After detail discussion with the participants the resource person explained the meaning of data analysis in following words.

“Data analysis refers to the process of organization of data (editing, classifying and tabulating of data) in order to reach at the findings. It is better to plan for the analysis before data collection and It is a process of computation of certain indices, measures, techniques or indicators to determine the trends, patterns and growths”.

## 1. Descriptive Data Analysis

The honorable resource person elaborated the descriptive statistics which is used for data analysis in various research reports. Detail of descriptive statistics as he defined is as follows:

- i) Simple educational action research involves descriptive statistics.
- ii) It provides a number of statistical measures or techniques used for the analysis and its interpretation
- iii) The following are some of the most common used statistical techniques in the research work:
  - Measures of central tendency
  - Measures of dispersion
  - Correlation

At the end of the lecture the resource person recaptured the lecture in the simple words and answered the questions, raised by the participants and the lecture was ended with thanks



## LIBRARY RESEARCH

*Khawaja Sabir Hussain*

D. D. (Head: Res. Div)  
AEPAM, Islamabad

*Mr. Zakauallah*

Librarian, AEPAM,  
Islamabad

The last session of the day was spent in the AEPAM library. The participants were briefed about the books available in the library. Participants were also provided relevant books/materials related to their research topics, which had already been allocated to them to prepare research proposals during workshop.



## PROCEEDINGS OF WORKSHOP (June 26, 2009)

### DEVELOPMENT OF RESEARCH PROPOSAL

*Khawaja Sabir Hussain*  
D. D. (Head: Res. Div)  
AEPAM, Islamabad

The first session was taken by Khawaja Sabir Hussain. In this session participants were guided to prepare their research proposal. The participants designed research proposals on the following research topics.

- Explore the Reasons of Low Quality of Textbooks at Primary Level in Pakistan (Appendix-4)
- Critical Analysis of Available Physical Facilities at Primary Level in Public Sector in Urban and Rural Area (Appendix-5)
- Role of Multiple Textbooks in Elimination of Wrote Memorization at Secondary Education (Appendix-6)
- Study on Science teachers Pedagogical content knowledge at Secondary Education (Appendix-7)
- Impact of Teaching Style On Students Performance (Appendix-8)
- Impact of Quality Education in Enhancing Efficiency of Educational Administration (Appendix-9)
- Development of the methodology to cover the entire curriculum through examination at SSC level (Appendix-10)





## HOW TO DRAW CONCLUSIONS AND WRITE RECOMMENDATIONS

*Dr. Hamid Niazi*  
Associate Professor, AIOU  
Islamabad

### **Importance of Conclusions**

The second session was taken by Dr. Hamid Niazi, Associate Professor. He started his lecture by describing the importance of conclusions. He was of the opinion that "success or failure is not a measure of whether a hypothesis is accepted or refuted, because both results still advance scientific knowledge. Failure is poor experimental design, or flaws in the reasoning processes, which invalidate the results. As long as the research process is robust and well designed, then the findings are sound, and the process of drawing conclusions begins".

### **What Has Been Learned**

In order to create link between previous and current knowledge of the participants, the resource person tried to explain the lesson, learned while conducting the research. He was of the opinion that "a researcher will summarize what he believe has been learned from the research, and will try to assess the strength of the hypothesis. Even if the null hypothesis is accepted, a strong conclusion will analyze why the results were not as predicted".

### **Leads for Future Research**

The honorable resource person highlighted that research provides guidance and direction about the future research. In fact this provides reference and foundation to conduct the research in the future. He stated that "the researcher can use these to suggest interesting directions for further study".

## Recommendations

The resource person finally guided the participants that how recommendations can be made. However, depending upon the field of study, recommendations are framed considering the importance of the research in the society.

At the end of the lecture, some questions were answered by the resource person and lecture was ended with thanks.

## RESEARCH REPORT WRITING

*Dr. Mah-i-Laqa Rafiq*

Deputy Educational Advisor

P & P Wing, M/o Education

Dr. Mah-e-Laqa, Deputy Educational Advisor has taken the session on research report writing. She started her lecture by explaining the general guide line which are as follow:

- Consider the audience
- Be concise, but precise
- Formatting, punctuation, numbers
- Unbiased Language
- Reader friendly

### Preliminary Pages

As far as previous pages are concerned she described that usually following pages are written while writing the report. The important pages and their presentation are as under:

- Title page: *Includes selected topic, the name (s) and address (es) of all authors, and date submitted.*
- Acknowledgement page
- Table of Contents
- List of Tables
- List of Figures
- Abstract

### Writing an Abstract

She elaborated that abstract should be crux of the research. In fact abstract provided sketch of the whole research in meaningful way. She highlighted the following points which should be considered while writing the abstract.

▪ Should be two hundred words or less. It a concise

summary of completed work covering the following:

- Purpose of the study - hypothesis, overall question;
- Objectives of the study;
- Brief description of the experiment;
- Results, including specific data - if the results are quantitative in nature, report quantitative data;
- Important conclusions or answers to the questions.

### **Main Body of the Report**

The honorable resource person provided the guideline for writing the main body of the research report in the following words.

- Introduction
- Theory construction /Review of related literature
- Methodological discussion
- Presentation and analysis of data
- Outcome of the research and interpretation
- Discussions of the findings
- Summary, conclusions implications and recommendations
- References (Bibliography)
- Annexure/ Appendixes

At the end of the lecture, she invited some questions from the participants and lecture was ended with thanks.

## PRESENTATION BY THE PARTICIPATION

*Khawaja Sabir Hussain*

D. D. (Head: Res. Div)  
AEPAM, Islamabad

The first and second session were reserved for the presentation by the participants. During this workshop two participants were supposed to develop one research proposal, which was presented by them. During their presentations various questions were raised and answered by the presenters. Detail of these proposals can be seen at Appendix 4-10.



## LIST OF PARTICIPANTS

| S.# | Name of the Participant | Designation   | Ministry/Department  |
|-----|-------------------------|---|--|
| 1.  | Mr. Jamil Ahmad Hashmi  | Deputy Educational Advisor                          | (Curriculum Wing), Ministry of Education                           |
| 2.  | Mr. Asif Sohail         | DEA/ID  | Projects Wing, Ministry of Education                               |
| 3.  | Mr. Farooq Aizam Abro   | Assistant Educational Advisor                       | P & P Wing, Ministry of Education                                  |
| 4.  | M. Abdul Razaq Bhutto   | Assistant Educational Advisor                       | P & P Wing, Ministry of Education                                  |
| 5.  | Mr. Ali Hyder Bhutto    | Assistant Director                                  | National Book Foundation, Ministry of Education                    |
| 6.  | Mr. Saleem Iqbal        | Assistant Director                                  | National Book Foundation, Ministry of Education                    |
| 7.  | Mr. Mirza Ali           | Assistant Controller of Examinations (HSSC-Secrecy) | Federal Board of Intermediate and Secondary Education              |
| 8.  | Mr. Muhammad Sarwar     | Research Officer                                    | Federal Board of Intermediate and Secondary Education              |
| 9.  | Miss Shafia Parveen     | Assistant Field Officer (PE)                        | National Education Foundation                                      |
| 10. | Mr. Imran-n-Haq         | Assistant Director (PE)                             | National Education Foundation                                      |
| 11. | Mst. Tahira Abdullah    | Research Officer                                    | National Institute of Science and Technical Education (N.I.S.T.E.) |
| 12. | Mr. Muhammad Kamran     | Training Officer                                    | National Institute of Science and Technical Education              |
| 13. | Mr. Shenshah Bahar Khan | Lecturer  | PAEC College Nellore. (M.Phil scholar)                             |
| 14. | Muhammad Sohail Ajmal   | Research Assistant                                  | AEPAM  |
| 15. | Numair Muhammad Khan    | Research Assistant                                  | AEPAM  |
| 16. | Muhammad Fazl-u-Rehman  | Assistant   | AEPAM  |
| 17. | Imran Hyder             | Internee  | AEPAM  |
| 18. | Muhammad Inamullah      | Internee  | AEPAM  |
| 19. | Miss Sina Safdar        | Internee  | AEPAM  |
| 20. | Miss Misbah Karim       | Internee  | AEPAM  |
| 21. | Miss Tayyba Azhar       | Internee  | AEPAM  |





## Appendix-2

**One Week Training Workshop on  
Educational Research for Officers of  
Ministry Of Education and Allied Departments  
June 22-27, 2009 at AEPAM  
Ministry of Education  
Islamabad**

| Day/Date                   | 8:30 a.m. - 9:45 a.m.   | 9:45 a.m. - 11:00 a.m.  | 11:30 a.m. - 12:45 p.m.  | 12:45 p.m. - 2:00 p.m.  |
|----------------------------|---|---|--|---|
| 22 June, 2009<br>Monday    | Inauguration:<br>Registration, Pre-<br>test, Introduction<br>and Course<br>Objectives               | Importance of Research<br>for Decision Making<br>(Prof. Dr. Haruma Jatoi)                 | Research for Policy<br>Issues/options<br>(Mr. T.M. Qureshi)            | Processes of<br>Educational<br>Research<br>(Ms. Khush Bakht<br>Hina)        |
| 23 June, 2009<br>Tuesday   | Types of Research<br>(Dr. Manzoor<br>Hussain Shah)  | Developing<br>Framework of<br>Research on the<br>Basis of Literature<br>(Dr. Hamid Nazir) | Basic Concepts of<br>Scientific Research<br>(Kh. Sabir Hussain)        | Finalization of<br>Research Topics<br>(Kh. Sabir Hussain<br>& Asif Hussain) |
| 24 June, 2009<br>Wednesday | Review of<br>Literature,<br>Bibliography and<br>Reference etc.<br>(Kh. Sabir Hussain)               | Sampling Techniques<br>(Malik Mushtaq Ahmed)  | Preparation of<br>Research<br>Instruments<br>(Madam Surayya<br>Rehman) | Methods of Data<br>Collection<br>(Raja Sabir<br>Hussain)                    |
| 25 June, 2009<br>Thursday  | Concepts of<br>Reliability and<br>Validity<br>(Malik Mushtaq<br>Ahmed)                              | Analysis and Interpretation<br>of Data<br>(Maza Tashid-ud-Din)                            | Commend  | Library Research<br>(Dr. Zakaulah)  |
| 26 June, 2009<br>Friday    | Development of<br>Research Proposal<br>By the participants<br>(Kh. Sabir Hussain<br>& Asif Hussain) | How to Draw Conclusions<br>and write<br>Recommendations<br>(Dr. Hamid Nazir)              | Research Report<br>Writing<br>(Dr. Moh-e-Luq)                          | <b>JUMMA<br/>PRAYER</b>   |
| 27 June, 2009<br>Saturday  | Presentation by<br>Participants<br>(Kh. Sabir Hussain<br>& Asif Hussain)                            | Continued   | Concluding<br>Ceremony   | <b>Refreshment</b>  |



## LIST OF RESOURCE PERSONS

| S.# | Name of the Participant  | Designation                | Ministry/Department                            |
|-----|--------------------------|----------------------------|--|
| 1.  | Prof. Dr. Haroona Jatoi  | Director General           | AEPAM  |
| 2.  | Mr. T. M. Qureshi        | Deputy Educational Advisor | P & P Wing, Ministry of Education              |
| 3.  | Ms. Mah-e-Laqa           | Deputy Educational Advisor | P & P Wing, Ministry of Education              |
| 4.  | Mirza Tawhiddudin        | Program Manager            | Academy of Educational Planning and Management |
| 5.  | Dr. Hamid Niazi          | Associate Professor        | Allama Iqbal Open University                   |
| 6.  | Dr. Manzoor Hussain Shah | Assistant Professor        | Allama Iqbal Open University                   |
| 7.  | Raja Sabir Hussain       | Assistant Professor        | Allama Iqbal Open University                   |
| 8.  | Khawaja Sabir Hussain    | Deputy Director (Research) | Academy of Educational Planning and Management |
| 9.  | Malik Mushtaq Ahmed      | Vice Principal             | Islamabad Model College for Boys               |
| 10. | Mr. Asif Hussain         | Research Officer           | Academy of Educational Planning and Management |
| 11. | Ms. Khush Bakht Hina     | Lecturer                   | National University of Modern Languages        |
| 12. | Mr. Zakaullah            | Librarian                  | Academy of Educational Planning and Management |
| 13. | Ms. Suraiya Rehman       | Vice Principal             | Government High School, Nalore, Islamabad      |



## EXPLORE THE REASONS OF LOW QUALITY OF TEXTBOOKS AT PRIMARY LEVEL IN PAKISTAN

*Mr. Jamil Ahmad Hashmi*

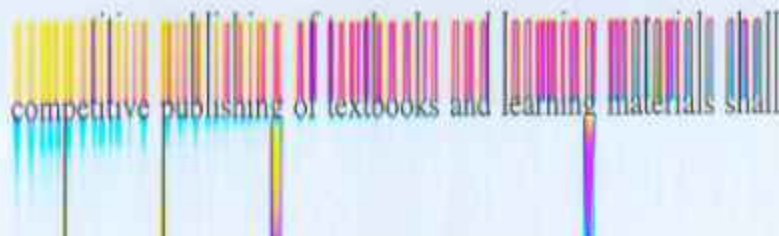
*Ms. Sana Safdar*

### **Introduction**

Textbooks are the means of teaching a school or class's curriculum and are considered the most important instructional material at a student's disposal. In a number of studies, children who received textbooks in the course of their study achieved better than those who did not.

Quality issue do not just affect the physical condition of books. Pakistani textbooks for Primary school children are replete with factual errors, inappropriate illustrations and problems with readability. The country's textbooks are published by the provincial Text Boards. These bodies, which monopolize the textbook market in government schools, produce books that feature many factual and grammatical errors, along with major deviations from the specifications set by the Curriculum Bureau.

Improvement in the quality of textbooks at primary level was one of the thrust areas of the Education Policy of 1998-2010. Textbooks are a major intervention to achieve this objective provided these are of excellent quality and in accordance with the National Curriculum. In this regard, on June 13, 2007 Federal Ministry of Education notified a National Textbook Policy with the prime objective for providing better quality textbooks at affordable prices across the country. National Textbook and Learning Materials Policy and Plan of Action 2007 envisages that a well regulated system of



competitive publishing of textbooks and learning materials shall  
be introduced as part of an enhanced public-private partnership  
in the development of education in Pakistan.

Development of textbooks and learning materials is an area of paramount importance. Its quality depends on interaction of agencies involved in the whole process. In this vague, policy of the government, serves as the corner stone. Previous to 2006, provincial text book boards and area governments were responsible for preparation of materials. It was observed that textbooks at primary level were replete with errors and omissions both process the point of view of content and material. There are not all active and presentable. Gender aspects were being ignored. It was an eye opener for the government and there is a dire need to review and redress the situation.

In 2006, new curriculum policy was approved/announced. Accordingly, textbooks and learning materials policy was also reviewed and revised to ensure development of good and error free textbooks for students at primary level in the country. As per this arrangement curriculum wing, Ministry of Education will supervise the whole process and provincial textbook boards will act as coordinators and facilitators. Authors from the private sector will be asked to develop materials for classes' I-V in the country. This will infuse competition and ensure private public partnership in the field of education.

#### **Statement of the Study**

Explore reasons for low quality of textbooks at primary level in Pakistan.

#### **Objectives of the Study**

- To investigate reason for low quality of textbooks at primary level
- To explore and identify defect, in Textbooks at Primary level.

- To develop mechanism for improvement in the quality of Textbooks and Learning materials.

### **Significance of the Study**

Development and production of textbooks must take place in line with curriculum development. This will ensure that students receive material that is relevant and will assist in learning and understanding course material, rather than causing further confusion.

The private sector should be responsible for the production and distribution of textbooks, along with government assistance. This will enhance the quality of the currently substandard textbooks.

### **Delimitation of the Study**

Considering time constraints and limited resources, this study will be delimited to Primary Schools in the province of Punjab

Major stakeholders such as authors, employees of provincial textbook boards, parents, and teachers will be consulted.

### **Methodology**

Interviews, Questionnaires, Observations and Checklists will be used to conduct this research.

### **Data Collection**

View of the official of the Punjab Textbooks Boards, Private publishers, Authors, Teachers and Students will be accommodated, where ever possible.

## Data Analysis

Table and graphics will be used during the research process.

### Findings, Conclusions and Recommendations

Briefing session will be arranged for authors/private publishers to acquaint them with new curriculum.



**CRITICAL ANALYSIS OF AVAILABLE  
PHYSICAL FACILITIES AT PRIMARY LEVEL IN  
PUBLIC SECTOR IN URBAN AND RURAL AREA**

*Mr. Ali Hyder Bhutto  
Mr. Imran Haider*

**Introduction**

Education is bound up with human race. Its boundaries are as wide as these of life. Education is necessary for each human being which develops human resources and it relates with the most important factor of national development. The workshops, training courses, seminars etc help to increase the knowledge in changing circumstance. The physical facilities are also main source for students to make the keen interest in their study which improve the quality as well as quantity in education.

In short, educating the child mean directing the child properly. Direction includes guidance as well as control. Both the teachers and the parent have a special role to play. At home the parents should appear as a model. At school, the teacher must inspire the child. It is our need to assess the availability of the educational facilities in the educational institutions in a developing country like Pakistan.

**Statement of the Problem**

The problems relates to physical facilities at primary level in public sector will be identified as under:

- i. The curricula will be prepared according to approach of the students.

- ii. Efforts will be made to upgrade the quality of all primary schools, through provision of qualified and experienced teachers as well as physical facilities like:
- Better location for schools.
  - Classrooms may be built according to need of students.
  - Boundary wall is necessary for school.
  - Furniture may be provided to students according to their requirement.
  - Flush system latrines may be built according to students ratio (male/female).

#### **Objectives of the Study**

- i. To explore the status of availability of physical facilities.
- ii. To prepare comparative statement of availability of physical facilities.
- iii. To calculate growth of availability of physical facilities.
- iv. To suggest measures for providing physical facilities.

#### **Significance of the Study**

There is a great stress on the provision of necessary physical facilities all over the Pakistan for ensuring result oriented education. Some schools have been provided surplus facilities while other are being deprived to provide physical facilities. Hence, the proper survey is required to be conducted to identify actual physical needs of students in schools. It will help us to provide the facilities to each school according to the ratio of students in school in urban and rural areas. Therefore, the survey expected to go a long way in helping the future planners to recognize the provision of physical facilities in primary schools of urban and rural areas.

#### **Methodology**

The study will be analytical and descriptive in nature. To carry out the study, documentary analysis and questionnaires will be used.

### **Construction of Research Instrument**

Following strategy will be adopted for the construction of research instrument.

#### **a. Documents Analysis**

All official documents related to availability of physical facilities at primary level in public sector of Islamabad will be studied and analyzed.

#### **b. Questionnaire**

On the basis of collected information through document analysis, a questionnaire comprising different aspects of physical facilities will be prepared for data collection.

#### **c. Focus Group Discussion**

Twenty percent Head of the schools selected as a focus group discussion to collect their opinion about different managerial roles as they are particularly playing in their respective school.

### **Collection of the Data**

The questionnaire will be personally administered and collected back from the heads of primary schools.

### **Analysis and Interpretation of Data**

Keeping in view of the objectives of the study, collected data through questionnaire and focus group will be calculated and analyzed.

## Findings, Conclusions and Recommendations

On the basis of data analysis, findings will be recorded and conclusions will be drawn. Recommendations will be made on the basis of the conclusions drawn in this study.

## ROLE OF MULTIPLE TEXTBOOKS IN ELIMINATION OF WROTE MEMORIZATION AT SECONDARY EDUCATION

*Mr. Muhammad Sarwar*  
*Mr. Saleem Iqbal*

### **Introduction**

The idea of prescribing only a single textbook as reading material is not reaching to some of the objectives. For example, in science teaching one of the objectives is to improve student in scientific ways of thinking and application of knowledge. However, when students know that assessment will be based on textbook, they do not think or apply their knowledge rather learn the contents of textbook by heard (rote learning/memorization). Moreover uni-textbooks fail to caters individual differences in reading ability. Teachers depend more on textbooks and do not explore the ways to make students learn, comprehend and to apply knowledge. Quality of textbooks is not improving due to single textbook policy of textbook boards and lack of competition in the market in this field. The objective that assessment should be based on curriculum rather than the textbooks can not be achieved through policy of uni textbooks. Situation in this case is so decorated that even majority of teachers have not seen the curriculum of their subject.

Multiple textbooks can play an important role as the contents covered in these books can broadly touch the curriculum, its scope and objective. Those objectives which could not be achieved through the use of single textbook can be had by prescribing multiple textbooks. This will also give the teachers an option to choose the reading material (according to curriculum) which they feel is most appropriate, application oriented and fulfill the needs of concept building among the students. Quality of textbooks can also be improved and content

contained therein be enriched as there will be competition

amongst the book writers for the selection of their books

Introduction of idea of multiple textbook at secondary level will help to reduce and eliminate the rote learning among the students and guide them to concept building and application of knowledge.

### **Objectives of the Study**

- i. To study the current system and its effect on rote learning
- ii. To measure the role of prescribing multiple textbooks for reducing/removing rote memorization among secondary school students and create awareness about the significance of issue between teachers and the taught.

### **Significance of the Study**

This research will help in improving the quality of education in terms of learning achievement of the secondary school students and will measure the pulse of teachers and the taught regarding their quest for seeing quality education rather continuing conventional method of learning.

Research will also create awareness among all stakeholders regarding the use of multiple textbooks as compared to single textbook and will provide guidance for future steps in the process of quality education to achieve the goal of learning outcome of the students.

### **Limitation of the Study**

- i. Research will be conducted for secondary school students.
- ii. It will be conducted for ICT.

## **Methodology**

### **i. Population**

- Educational Administration including officers of Ministry of Education.
- BISEs
- Head of the institution
- Teachers
- Students.

### **ii. Sample**

- Universal sample of concerned educational administration.
- Universal sample of BISEs.
- Universal sample of the Head of Institutions.
- 10% of the teachers in institutions.
- 5% of the students in institution.

### **iii. Research Instrument**

For the measurement of the role of multiple textbook, after going through all research instruments, it has been found that questionnaire will be best research instrument, in this particular study. As the population consists of Educational Administrators, authority of BISE, Head of the institution, teachers and the taught. Therefore, it will be appropriate to use questionnaire as a research instrument.

### **Data Collection**

Data will be collected through personal visit and mail where personal visit are not possible by means of a well prepared questionnaire.

## Data Analysis

Frequency distribution will be applied for the analysis of data and percentages will be calculated and analyzed.

## Findings, Conclusions and Recommendations

Findings, conclusions and recommendations will be carried out after data analysis and interpretation.



**STUDY ON SCIENCE TEACHERS  
PEDAGOGICAL CONTENT KNOWLEDGE AT  
SECONDARY EDUCATION**

*Mr. Muhammad Kamran  
Mr. Muhammad Inamullah*

**Introduction**

The role of science teachers for effective science teaching cannot be ruled out. The science teacher is not only enclosed with good quality but also he/she has certain responsibilities like an innovator, an implementer of curriculum, planner, a resource manager, a facilitator of learning and an evaluator of learning outcomes. The science teachers having professional education or training can teach science more effectively because they are well aware of the cognitive levels of the students, identified objectives and existing classroom conditions.

At the secondary level, in any class to provide appropriate learning expensive to the students is the main task of the science teacher. Pedagogical context knowledge and skills the teachers to decide that how he will teach the students and which method he will use like lecture-cum discussion method, lecture-cum-demonstration method and scientific method, merits and demerits of these teaching method.

**Statement of the Study**

Professional education for teaching science is compulsory and the study is undertaken to check the pedagogical content of teachers at secondary level in Islamabad Capital Territory (ICT).

## **Objectives of the Study**

The objectives of the study will be as follow:

- To explore the status of pedagogical content knowledge of the science teachers.
- To investigate the weaknesses and strength of providing pedagogical knowledge to the teachers while their trainings.
- To suggest measure to improve the pedagogical skills of the secondary school science teachers.

## **Significance of the Study**

This study will be interested and significant/ for teacher training institutions and will provide guideline to improve their pedagogical element of training programmes of a teacher having better pedagogical skills can prepare a lesson plan, unit plan, instructions or group discussions for slow learners, use of resources like integrated science kits, audio-visual aids, community resources, multimedia package and innovative experience in science.

## **Delimitation of the Study**

Considering the time constraints and limited resources, this study will be conducted to check the pedagogical content knowledge of science teachers at secondary level in ICT.

## **Methodology**

This study will be analytical in nature and questionnaire will be used.

## **Data Collection**

Data will be collected by random sampling.

### **Data Analysis**

Data will be analyzed by using frequency and percentages.

### **Findings, Conclusions and Recommendations**

Findings, conclusions and recommendations of the research study will be written at the end on the basis of data analysis and interpretation.



## **IMPACT OF TEACHING STYLE ON STUDENTS PERFORMANCE**

*Mrs Tahira Abdullah  
Ms Misbah Karim*

### **Introduction**

Successful teaching brings about effective learning. Teaching is often thought as something that comes rather naturally to people who know their subject. In general it is thought that it is a simple process that produce simple outcome. It is an art that teacher and student create and share environment to achieve their objectives.

Many teachers believed in our system on subject matter but the school proposes to shape the personality of the learner by equipping him with the resources of human culture. So it's the moral duty of teacher to convey knowledge in a special way to increase the performance if student.

### **Objectives of the Proposal**

Main objectives of this proposal are as follows

- a) To improve teaching skills of teachers at secondary level
- b) To provide in-service teacher training program regularly
- c) To develop scientific attitude of teacher at secondary level
- d) To polish students morally and ethically
- f) To evaluate students progress due to old lecture method and new style of lecture

## Significance of the Proposal

Teaching and learning is a two way process occurring simultaneously. Teacher must be interactive cooperative and counselor for students, but teacher require job security. Job security makes a teacher sincere towards his/her job. So teacher use new method and new technique like activity base teaching, which is new and interactive. This proposal provides guidelines to study teaching style of teacher at secondary level and its impact on student's performance.

Present government emphasize on the improvement of education at secondary and elementary level. But if the teacher is not trained in a proper way we cannot achieve this objective to increase literacy rate. Technique of teacher should be modern, students center and understating, like activity base method, problem-solving method, and group discussion method.

Our system of education use old method of teaching like lecture method. It's the only method of delivering knowledge not sharing of knowledge. By Appling new techniques, we can assess and evaluate the knowledge of student effectively.

### **Limitation of Study**

Considering the factors and limited resources available this study will delimit to Islamabad and Rawalpindi. We are also delimited to secondary level of teachers and students.

### **Methodology**

The study will be annalistic and descriptive in nature. To carry out studies analysis, questionnaire and pilot testing will be carried out through a survey in Islamabad and Rawalpindi.

### **Sample**

There are 50 selected schools as a sample and out of which 25% of the wattage to boy's secondary schools. And 2 schools variable are use in pilot testing per day.

### **Construction of Research Instrument**

Pilot testing will be based on the basis of questionnaire. The researcher and his team will conduct it regularly. Research tools will evaluate teaching style of teacher and its impact on student's performance.

### **Data Collection**

Data will be collected from the head master, voice principle as a primary source and from parents as a secondary source. Data analysis will be conducted on the basis of statistical tests.

### **Conclusion**

One of the major functions of this proposal is to remove educational flaws in our system. Teacher lack basic concept and clarification therefore, he/she cannot set objectives clearly and thoroughly.

This proposal will be use to improve teaching style. Teacher training will be polish, upgrade knowledge. Teacher, which will give better, results in schools, achievements at high level. It's slow but hard, continuous process.





## IMPACT OF QUALITY EDUCATION IN ENHANCING EFFICIENCY OF EDUCATIONAL ADMINISTRATION

*Mr. M. Abdual Razaq Bhutto*  
*Mr. Muhammad Sohail Ajmal*

### **Introduction**

Educational administration plays vital role in the development of education system. Effective administration is pre-requisite for the quantitative expansion as well as qualitative improvement of education system. The present era of information technology has made the role of Education Managers more complex and crucial than ever before because now Education Manager has to meet the challenges of constantly changing scenario of the world.

Administration is the management of executive affairs. The term also demotes the group of managers and the period of their management.

The quality means standard of efficiency, goodness or work. Quality as entitled for high degree, the basic material. Quality of education dependence upon many factors which includes teachers quality, availability of teaching learning materials, physical facilities and socio-economic backgrounds.

Quality education implies meaningful learning, which is usually the result of effective schooling. It implies the result of effective and efficient use of resources. The education system in Pakistan suffers from the lacuna of shortfall between optimum resource and the reality of budgets.

Educational administration plays vital role for

quantitative expansion as well as qualitative improvement of educational system in the country. In this way the whole education system depends upon the professional capabilities of educational managers because without quality education they cannot play their required role to meet the challenges of present era.

The purpose of this study is to determine a connection between quality educations obtained by superintendents in educational administration.

#### **Statement of the Problem**

The present study will be designed as an *"Impact of Quality Education in Enhancing Efficiency of Educational Administration"*.

#### **Objectives of the Study**

The main objectives of this study will be :

1. To explore the efficiency of the administration in educational institutions
2. To suggest viable measures for policy formulation

#### **Significance of the Study**

This study will be of immense interest for the educational managers, policy makers and planners.

Moreover, the findings of this study may be helpful for educational instructor/teachers/head teachers, who have direct interaction with student.

### **Delimitation of the Study**

Considering the time contrarians and limited available resources, this study will be delimited to Islamabad district only.

### **Methodology**

Following methods and procedures will be adopted for conducting this research study.

### **Research Methodology**

Quantitative descriptive research method will be adopted for conducting this study.

### **Population**

All educational managers of educational institution will be the population of this study.

### **Sample**

8 (4 public & 4 private) educational institute will be randomly selected for data collection with equal ratio of rural, urban, male & female as sample of the study.

### **Research Instruments**

Basic information sheet (questionnaire) about the Education Managers of different level in order to collect information.

### **Collection of Data**

Researcher will collect data from the sample district.

## **Analysis and Interpretation of Data**

Collected data through questionnaire and focus group will be calculated and analyzed keeping in view of the objectives of the study. Mean percentage and Standard Deviation will be used.

### **Findings, Conclusions and Recommendations**

On the basis of data analysis, findings will be recorded and conclusions will be drawn. Recommendations will be made on the basis of the conclusions drawn in this study.

**DEVELOPMENT OF THE METHODOLOGY TO  
COVER THE ENTIRE CURRICULUM THROUGH  
EXAMINATION AT SSC LEVEL**

*Mirza Ali  
Mr. M. Fazal-ur-Rehman*

**Introduction**

The main aim of an examination is to check and examine the ability of a student and the extent of his/her comprehension and understanding in a particular curriculum. The prevalent examination system does not check the level or percentage coverage of the curriculum studied but a few questions are selectively gain in a three/two homes question papers which do not represent at all the entire curriculum (contents of syllabus). This is the basic problem and an emergent attention is required for the solution of this impediment in the flow of quality education. A student studies a curriculum of a particular subject in entire academic year which has several hundred Students Learning Objectives (SLO's) but only 5 to 6% of the SLO's of the subject are covered in an examination paper of three hours. The examination of Secondary School Certificate (SSC) level must check the ability and capability of students in the entire curriculum (syllabus or contents) but the inverse happens in the current system of examination and only peripheral knowledge is examined in the annual examination question paper.

The aforementioned views elaborated genuine problems, impeding educational system of the country at SSC level. The problem is very critical and crucial; and needs emergent attention. If certain steps are taken to replace the above mentioned examination system that tests the students ability very selectively and the most desperate aspect is that after securing 90% marks in a particular subject by a student at SSC level after

vetting through annual examination, does not mean that he/she

has 90% command over the entire curriculum that he/she has studied during the whole academic year. On the contrary, it shows the capability of student is 90% in the selected questions of the question paper but about the portion of the curriculum that has not been made the part of the question paper, we cannot say about the ability of a student. So the problem is genuine and needs attention for betterment of the education system of the country.

#### **Objectives of the Study**

- With the help of this study/research, the entire curriculum coverage may be ensured.
- Students will study and complete the whole curriculum of SSC level because the examination will be based on the entire curriculum.
- It will enhance comprehension of students and will kill the custom/culture of selective study.

#### **Significance of the Study**

This study is very significant because it will be an innovative millstone in the field of examination systems at SSC level. It will help in developing and devising a methodology that will surely cater for the coverage of the entire curriculum at SSC level with the help of examination. It will also encourage the examinees to over each and every Students Learning Objective (SLO) of the whole curriculum of a particular subject at SSC level. Furthermore, it will enhance habits/attitudes of students to comprehend the contents of the curriculum instead of selective study based on cramming and rote learning. It will usher in an era of evolutionary changes in the field of examination and consequently the entire education system will be accelerated towards its real and ultimate objectives based on learning and scholarship.

### **Delimitation of the Study**

In the wake of time constraints, the study will be delimited to the Federal Board of Intermediate and Secondary Education, H-8/4, Islamabad.

### **Methodology**

#### **i. Population**

Students of class IX enrolled with the Federal Board of Intermediate and Secondary Education.

#### **ii. Sample of the Study**

5% of the total enrolled students will be randomly selected each from FG setup, Model setup, cants and Garrison setup, OPF setup, Fauji Foundation schools, Army Public schools, Bahria Schools, School Situated Overseas and private schools etc. The sample will be based on the proportional percentage of male and female students so that all the students are represented equally.

#### **iii. Research Instrument/tools**

Two types of Questionnaires, namely Closed and Open-ended Questionnaires will be distributed among the students of SSC level to collect the required data.

#### **iv. Methods of Data Collection**

In this study the data will be collected by involving mails through the examination superintendents of SSC-I examination of both the male and female students. The data will be selected from the FG, Model, Fauji Foundation, Bahire, OPF, Overseas and Private educational institutions by using stratified sampling. The superintendents will be asked to get the questionnaire of both types filled from 5% of the total strength by every 5<sup>th</sup> student according to their roll number. It will represent both male and female students.

## Data Analysis

Frequency method will be applied for the analysis of data and percentage will be calculated.

## Findings, Conclusions and Recommendations

In the case of this study, the findings will be reached out after the data is analyzed and thereafter recommendations will also be recorded after the findings are concluded. Findings will provide foundation to the recommendations of the study.



### EVALUATION/ASSESSMENT OF WORKSHOP

The pre and post test has been used to find out the impact of training workshop. Pre-test help to understand the professional capacity of participants at the time of starting and post-test provide information about the improvement in the knowledge of the participants at the time of completion of the workshop.

All the participants have been given a pre-test questionnaire containing training workshop contents. After completion of workshop, the post-test was administered to the participants. Table-1 shows total number and percentage of responses of participants indicating four levels of knowledge, No, Low, Moderate, and High knowledge in Pre and Post test.

**Table-1**  
**Pre-Test and Post Test Sheet**

| Level     | No | % | Low | %  | Moderate | %  | High | %  | Total |
|-----------|----|---|-----|----|----------|----|------|----|-------|
| Pre Test  | 0  | 0 | 12  | 57 | 9        | 43 | -    | -  | 21    |
| Post Test | 0  | 0 | -   | -  | 2        | 10 | 19   | 90 | 21    |

Table-1 shows that only 43% respondents had moderate knowledge about the concepts/topics of the workshop. Whereas 57% has low knowledge about the contents of the workshop in the pre-test. On the contrary after attending the workshop the post-test shows that 90% participants had high knowledge about the contents of the workshop and 10% had moderate knowledge. This indicates that workshop has very positive impact in increasing the knowledge of the participants of the workshop.

## Evaluation of resource persons

The evaluation of resource persons was conducted to get information about relevance of the topics regarding workshop. Presentation made by the resource persons and quality of material. The collected data is presented in the following table 2

**Table-2**  
**Evaluation of Resource Person**

(Figure in %)

| Topics & Resource Persons  | Relevance of Topic (Please Tick) |    |   | Presentation (Please Tick) |    |    | Material Presented (Please Tick) |    |    |
|--|----------------------------------|----|---|----------------------------|----|----|----------------------------------|----|----|
|  | M                                | R  | I | VG                         | G  | S  | VG                               | G  | S  |
| Importance of Research for Decision Making<br>(Prof. Dr. Haroon Jatoi)                     | 42                               | 58 | 0 | 58                         | 42 | 0  | 48                               | 52 | 0  |
| Research for Policy Issues/Options<br>(Mr. T.M. Qureshi)                                   | 42                               | 58 | 0 | 74                         | 16 | 10 | 53                               | 47 | 0  |
| Processes of Educational Research<br>(Mr. Khush Baksh Hina)                                | 26                               | 74 | 0 | 21                         | 57 | 22 | 37                               | 53 | 10 |
| Types of Research<br>(Dr. Manzoor Hussain Shah)  | 53                               | 47 | 0 | 32                         | 63 | 5  | 42                               | 53 | 0  |
| Developing Framework of Research on the Basis of Literature<br>(Dr. Hamid Nuzi)            | 53                               | 47 | 0 | 53                         | 37 | 10 | 47                               | 53 | 11 |
| Basic Concepts of Scientific Research<br>(Khawaja Sabir Hussain)                           | 53                               | 47 | 0 | 58                         | 42 | 0  | 42                               | 53 | 5  |
| Finalization of Research Topics for designing Research Proposal<br>(Khawaja Sabir Hussain) | 53                               | 47 | 0 | 63                         | 37 | 0  | 53                               | 47 | 0  |

|  |    |    |   |    |    |    |    |    |    |
|--|----|----|---|----|----|----|----|----|----|
| Review of Literature, Bibliography and Reference<br>( <i>Khawaja Sabir Hussain</i> ) | 58 | 42 | 0 | 68 | 21 | 11 | 63 | 21 | 16 |
| Sampling Techniques<br>( <i>Malik Mushtaq Ahmad</i> )                                | 37 | 58 | 5 | 21 | 63 | 16 | 42 | 37 | 21 |
| Preparation of Research Instruments<br>( <i>Ms. Surayia</i> )                        | 26 | 69 | 5 | 16 | 21 | 63 | 21 | 21 | 58 |
| Methods of Data Collection<br>( <i>Dr. Sabir Hussain Raja</i> )                      | 26 | 74 | 0 | 16 | 58 | 26 | 31 | 53 | 16 |
| Concepts of Reliability and Validity<br>( <i>Malik Mushtaq Ahmad</i> )               | 47 | 53 | 0 | 32 | 47 | 21 | 37 | 53 | 10 |
| Analysis and its Interpretation<br>( <i>Mirza Taulidudin</i> )                       | 68 | 32 | 0 | 63 | 32 | 5  | 53 | 37 | 10 |
| How to Draw Conclusions and Write Recommendations<br>( <i>Dr. Hamid Niazí</i> )      | 47 | 53 | 0 | 42 | 47 | 11 | 32 | 47 | 21 |
| Research Report Writing<br>( <i>Dr. Mah-e-Laqa Rafiq</i> )                           | 68 | 32 | 0 | 53 | 42 | 5  | 58 | 32 | 10 |

*Most=M, Relevant=R, Irrelevant=I, Very Good=VG, Good=G, Satisfactory=S*

Table-2 shows that 58% participants were of the view that Prof. Dr. Haroona Jatoi presented relevant topic and 42% said that she presented most relevant topic as far as her presentation was concerned 58% participants were of the view that her presentation was very good whereas 52% said her material was good. Similarly 58% participants were of the view

that Mr. T.M. Qureshi presented relevant topic and 74% has

viewed that his presentation was very good and 53% viewed that he presented very good material. 74% participants were of the view that Ms. Khush Baksh Hina presented relevant topic. 57% told her presentation was good and 53% were of the opinion she presented good material. 53% participants said that Dr. Manzoor Hussain Shah presented relevant topic and in view of 63% his presentation was good and 53% told that his material was good. Similarly 53% participants were of the view that Dr. Hamid Niazi presented most relevant material, his presentation was very good and material was good. 53% participants were of the opinion that Khawaja Sabir Hussain presented most relevant topic. In view of 58% his presentation was very good and 53% said his material was good. Similarly as far as his next topic was concerned 53%, 63% and 53% participants were of opinion that he presented most relevant topic, his presentation was very good and material was also very good respectively. 58%, 68% and 63% participants were of the view that review of literature, bibliography and reference presented by Khawaja Sabir Hussain was most relevant, his presentation was very good and material was also very good respectively.

As far as Sampling Techniques was concerned 58%, 63% and 42% participants were of the view that Malik Mushtaq Ahmed has presented most relevant topic, his presentation was good and his material was very good respectively. 69% participants were of the view that Ms. Surayia presented relevant topic. In view of 63% her presentation was satisfactory and material was also satisfactory in view of 58% participants. 74% participants were of the view that Dr. Sabir Hussain Raja presented relevant topic. 58% said his presented was good and 53% were of the view that his material was good. 53%, 47% and 53% participants were of the view that Malik Mushtaq Ahmed presented relevant, his presentation was good and material was also good respectively. 68%, 63% and 53% participants were of the view that Mirza Tauhidudin presented most relevant topic, his presentation was very good and material was also very good respectively. 53%, 47% and 47% participants were of the view

that Dr. Hamid Niazi presented relevant topic, his presentation was good and his presented good material. 68%, 53% and 58% participants were of the view that Dr. Mah-e-Laqa Rafiq presented most relevant topic, her presentation was very good and she presented very good material respectively.

**Table-3**  
**Description of workshop**

| Description  | Very relevant | Relevant | Partially relevant |
|--|---------------|----------|--------------------|
| Considering the workshop description, was the workshop relevant to your professional needs | 85%           | 15%      | -                  |

The table-3 indicates that 85% participants were of the view that description of workshop was very relevant to their professional needs. Whereas 15% participants were of the opinion that the workshop was relevant to their professional needs.

**Table-4**  
**Expectation regarding workshop**

| Description                              | Very expectation | Better than expectation | Short of expectation |
|--|------------------|-------------------------|----------------------|
| Was the workshop up to your expectation? | 74%              | 21%                     | 5%                   |

The table-4 shows that 74% participants had opinion that the workshop was up to their expectations, while 21% participants were of the view that the workshop was better than their expectations.

**Table-5**

**Duration of the Workshop**

| Description                      | About right | Too long | Too short |
|----------------------------------|-------------|----------|-----------|
| Was the duration of the workshop | 37%         | -        | 63%       |

The table-5 shows that 37% participants were of the opinion that duration of the workshop was right. Where 63% participants were of the view that the duration of the workshop was too short.

**Table-6**  
**Design and in logical sequence**

| Description   | Fully consistent | Partially consistent | Not consistent |
|---|------------------|----------------------|----------------|
| Was the workshop well designed and in logical sequence? | 74%              | 26%                  | -              |

The table-6 shows that 74% participants were of the opinion that design of the workshop fully consistent. Where 26% participants were of the view that the design and in logical sequence of the workshop was partially consistent.

**Table-7**  
**Contents of the workshop**

| Description  | Fully relevant | Partially relevant | Not relevant |
|--|----------------|--------------------|--------------|
| The contents of the workshop were properly justified considering professional needs of the participants? | 75%            | 25%                | -            |

The table-7 indicates that 75% participants had opinion that content of the workshop was fully relevant and the contents of the workshop were properly justified their professional needs. 25% participants were of the view that it was partially relevant.

**Table-8**  
**Objectives of the workshop**

| Description   | Fully achieved | Partially achieved | Not achieved |
|---|----------------|--------------------|--------------|
| After attending this workshop, do you think that the objectives were achieved | 90%            | 10%                | -            |

The table-8 shows that 90% participants were of the opinion that the objectives were fully achieved. Whereas 10% participants were of the view that the objectives were partially achieved.

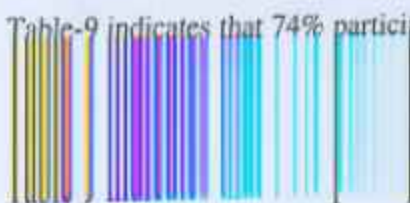
#### Teaching methods

The participants were also requested for providing their opinion regarding teaching methods of the resource person. Their responses are presented in table-9.

**Table-9**  
**Concept and methodology**

| Description                                     | Yes | No  |
|---|-----|-----|
| Concepts and methodology based on illustrations | 74% | 26% |

Table-9 indicates that 74% participants were of the view



that concepts and methodology of the workshop was based on illustration, whereas 26% participants were of the opinion that the concepts and methodology of the workshop was not based on illustrations.

**Table-10**  
**Practical oriented**

| Description                     | Yes | No |
|---------------------------------|-----|----|
| Approach was practical oriented | 95% | 5% |

The table 10 shows that 95% participants were of the opinion that approach of the workshop was practical oriented.

**Table-11**  
**Themes of the workshop**

| Description  | Very relevant | Relevant | Partially relevant |
|--|---------------|----------|--------------------|
| Were the themes presented in the workshop relevant to problems you are experiencing in your practical situation? | 75%           | 25%      | -                  |

Table-11 shows that 75% participants had opinion that themes presented in the workshop were very relevant to the problems. 25% participants were of the view that themes were relevant.



**Table-12**  
**Motivation Level**

| Description   | Very high interaction | Highly interaction | Average |
|---|-----------------------|--------------------|---------|
| The motivational level to participate in discussion | 76%                   | 24%                | -       |

The table-12 shows that 76% participants were of the opinion that during the workshop the motivational level to participate was very highly interactive. 24% participants had opinion that it was highly interactive.

**Table-13**  
**Workshop Administration**

| Description   | Excellent | Good | Average |
|---|-----------|------|---------|
| How would you rank the general administrative arrangements of the workshop in respect of session, conference room facilities and refreshments, etc? | 74%       | 26%  | -       |

Table-13 indicates that 74% participants were of the opinion that the general administrative arrangements of the workshop in respect of session, conference room facilities and refreshments, were excellent, whereas 26% participants had opinion that it was good.

Student  
Information

Student Name: \_\_\_\_\_  
 Student ID: \_\_\_\_\_  
 Date: \_\_\_\_\_

| Section | Grade | Section Number | Teacher   |
|---------|-------|----------------|-----------|
| Math    | 5     | 101            | Mr. Smith |

This form is required for all students. It must be filled out by the student or a parent/guardian. The information provided here will be used for administrative purposes only.

Parent/Guardian  
Information

| Name         | Address                        | Phone          | Signature          |
|--------------|--------------------------------|----------------|--------------------|
| Mr. John Doe | 123 Main St, Anytown, CA 90210 | (555) 123-4567 | <i>[Signature]</i> |

The parent/guardian's signature is required for this form to be valid. Please print the name and address clearly. The phone number should be a home or mobile phone number.