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**EDUCATIONAL GOALS, CURRICULA AND TEXTS AT THE PRIMARY LEVEL
IN PAKISTAN**

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June 1989

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Academy for Educational Planning and Management

TABLE OF CONTENTS

1. Introduction
2. National Goals
3. The Process of Curriculum Development
4. Mathematics
 - 4.1 Mathematics curriculum
 - 4.1.1 General objectives
 - 4.1.2 Specific objectives
 - 4.1.3 Unit objectives
 - 4.2 Mathematics textbooks
 - 4.2.1 Grade one mathematics textbooks
 - 4.2.2 Grade four mathematics textbooks
 - 4.2.3 Grade five mathematics textbooks
 - 4.3 Timetable
 - 4.4 Mathematics testing in Grade five
5. Urdu
 - 5.1 Urdu curriculum
 - 5.1.1 General objectives
 - 5.1.2 Specific objectives
 - 5.2 Mathematics textbooks
 - 5.2.1 Grade one mathematics textbooks
 - 5.2.2 Grade four mathematics textbooks
 - 5.2.1 Grade five mathematics textbooks
 - 5.3 Timetable
 - 5.4 Urdu testing
6. Conclusions

EDUCATIONAL GOALS, CURRICULA AND TEXTS AT THE PRIMARY LEVEL IN PAKISTAN

Ahmad Nawaz Malik and Andrea B. Rugh

1. Introduction

The purpose of this paper is to provide background information for a study of classroom practices in Pakistan. The study is a collaborative effort of the Basic Research and Implementation in Developing Education Systems (BRIDGES) Project of Harvard University and the Academy for Educational Planning and Management (AEPAM) in Islamabad.¹ The paper describes the national goals for primary education in Pakistan, and the curriculum as it is represented in documents spelling out general and specific objectives and unit level content. It briefly describes the process by which published curricula are translated into textbook content and provides examples for grades one, four and five Urdu and mathematics. Sample tests are included in the Annexes.

Generally speaking, in an efficient education system, the national goals outline broad objectives while the curriculum or syllabus converts these goals into specific and measurable objectives. Textbooks provide the content support for implementing the objectives of the national system. Without broad goals the educational system remains unfocused. Without measurable objectives, it is difficult to evaluate the success of the system. Without the structure that the textbooks provide, the execution of the educational goals tends to be uneven and heavily dependent upon the strengths and weaknesses of the teaching force. In an ideally functioning system, all the components of the educational program articulate in support of the goals determined by policy makers to be the desired end products of the program.

2. National Goals

The national goals for the educational system of Pakistan are found in a document entitled "The National Education Policy and Implementation Program", published in 1979 by the Ministry of Education in Islamabad. The main goals of the educational program are to:

- (a) foster in the hearts and minds of the people of Pakistan, generally, and students, in particular, a deep and abiding loyalty to Islam and Pakistan, and develop in them a living consciousness of their spiritual and ideological identity, thereby strengthening a unified outlook in the people of Pakistan, based on justice and

fair play.

- (b) create awareness in every student that he, as a member of the Pakistani Nation, is also a part of the universal Muslim Community (Ummah) and that he is expected to make a contribution, first, towards the welfare of fellow Muslims inhabiting the globe and, second, to help spread the message of Islam throughout the world.
- (c) produce citizens who are fully conversant with the Pakistan Movement, its ideological foundations, history and culture so they feel proud of their heritage and display firm faith in the future of the country as an Islamic state.
- (d) develop and inculcate, in accordance with the Quran and Sunnah, the character, conduct and motivation expected of a true Muslim.
- (e) provide and ensure equal educational opportunities to all citizens of Pakistan and provide minorities with adequate facilities for their cultural and religious development, enabling them to participate effectively in the overall national effort.
- (f) impart quality education and develop fully, according to their capacities, all individuals' potentialities, through training and retraining; and develop the creative and innovative faculties of the people, building their capabilities to effectively manage social, natural and productive forces, consistent with the value system of Islam.
- g) provide an acceptable level of functional literacy and fundamental education to all citizens of the country, particularly the young, irrespective of their faith, caste and creed in order to enable them to participate productively in the total national effort.
- (h) create interest and love for learning and discipline among the youth and ensure that every student realizes that education is a continuous and life-long process.
- (i) promote and strengthen scientific, vocational and technological education, training and research in the country and use this knowledge for socioeconomic growth and development, thereby ensuring a self-reliant and secure future for the nation. (1979: page i-ii, minor editing)

Overall, the national goals of the educational system are directed at producing graduates who will contribute as good

citizens and good Muslims to the welfare of the nation. The educational system is charged with developing the specific skills and character traits in students which will lead to those ends.

3. The Process of Curriculum Development

The Curriculum Wing of the Ministry of Education, which developed out of the National Bureau of Curriculum and Textbooks, established in 1967, is responsible for ensuring that the contents of the primary curricula in the four provinces meet a specified standard.

Curriculum development is expected to follow a specified procedure. The Curriculum Wing of the Ministry of Education solicits draft curricula for each subject and grade level from Provincial Curriculum Bureaus, who in turn call together their own committees of teachers and subject specialists to comment on the drafts. The National Committee on Curriculum analyzes the drafts, giving consideration to the experts' comments, and then submits its own recommendations to the Ministry of Education for final approval.

Once approved the curriculum is published and, in the form of general goals and specific grade and subject objectives, is sent to the Provincial Textbook Boards for the preparation of textbooks. Included in the curricula are technical specifications and outlines for topical units of the textbooks. In practice these topical outlines, rather than other specifications of the curriculum, guide the development of textbooks and are responsible for determining a general uniformity of content across all provinces. In the process the content of textbooks becomes topic-focused rather than skill-focused, though this fact does not preclude the development of skills from this material. Textbooks are printed and distributed in the individual provinces.

4. Mathematics

4.1 Mathematics curriculum

The curriculum for mathematics in grades one through ten was revised between 1973 and 1976 to include the concepts of new math. However, because of the difficulty of implementing these new curricula and because of criticism about their relevance, a national conference was convened in 1979 of teachers, textbook writers and educators to discuss a new revision of the mathematics curriculum. The final version was approved in 1981.

4.1.1 General objectives. The general objectives of the primary school mathematics curriculum broadly state the educational needs of Pakistani children in this subject matter. The program is directed to:

- (a) satisfy the mathematical needs and interests of the child

through developing mathematical capacities that he may use effectively in his personal and social life;

- (b) develop a disciplined mind, sound judgement and a capacity for rationally solving the problems of everyday life;
- (c) provide the foundations for understanding scientific reasoning and calculation;
- (d) create an appreciation for and interest in mathematics, by demonstrating the contribution it has made and is making to our present civilization and culture.
- (e) provide guidance for the discovery and creation of patterns.

(1981:Document circulated by the Curriculum Wing, Ministry of Education, Islamabad)

4.1.2 Specific objectives. The specific objectives of the primary school mathematics curriculum reduce the broad abstract requirements above into still broad but somewhat more specific learning goals. The program should help the child:

- (a) acquire basic knowledge of numbers;
- (b) develop appropriate skills of computation in four fundamental mathematical operations;
- (c) acquire basic knowledge of two and three dimensional geometrical figures;
- (d) develop ability to solve practical problems by the application of fundamental measures (money, time, weight, length);
- (e) understand the presentation of data in visual form;

(1981:Document circulated by the Curriculum Wing, Ministry of Education Islamabad)

Both general and specific mathematics objectives are stated broadly and in their present form are not easily measured for the purpose of evaluating whether students acquire these skills through their studies. Without much difficulty most could be made more specific and measurable. Curriculum documents do not make explicit the logical connection between the general and specific objectives of the mathematics curriculum.

4.1.3. Unit objectives. Unit level objectives, though usually not stated explicitly in such a way, describe learning objectives

in terms which make them more susceptible to measurement. For illustrative purposes here, we will include the unit contents for grades one, four and five only.

GRADE ONE

Unit-I. Pre-Number Concepts:

- (a) more than; less than.
- (b) concepts of bigger and smaller, heavier and lighter, longer and shorter.

Unit-II. Real Numbers:

- (a) numbers from 1 to 9.
- (b) writing numbers from 1 to 9
- (c) the concept of zero.
- (d) inequalities involving numbers from 1 to 9, without symbols.
- (e) introduction to the decimal system.
- (f) numbers from 10 to 100.
- (g) writing random numbers from 10 to 100.
- (h) writing random number from 1 to 100.
- (i) the concepts of half and quarter (they should not be written as $1/2$ and $1/4$).

Unit-III. Algebraic Operations:

- (a) the addition of two numbers, the sum equaling not more than 9.
- (b) the addition of two numbers, the sum equaling not more than 18.
- (c) the addition of two numbers, the sum equaling not more than 50.

Unit-IV. Money:

Recognition of Pakistani coins.

Unit-V. Calendar:

The names of the days of the week (orally)

GRADE FOUR

Unit-I. Real Numbers:

- (a) decimal numeration system up to one million and crore (10 million).
- (b) introduction to roman numerals.
- (c) even and odd numbers.
- (d) the informal concept of associative property in multiplication.
- (e) the informal concept of distributive property.
- (f) introduction of improper and compound fractions.

- (g) equivalent fractions.
- (h) comparison of fractions.
- (i) the informal concept of commutative property in addition and multiplication (involving fractions and integers).

Unit-II. Algebraic Operations:

- (a) introduction of decimal fractions.
- (b) multiplication of numbers with three digits.
- (c) division of numbers with three to four digits by numbers up to 99 (with or without remainder).
- (d) problems involving four fundamental operations using brackets.
- (e) addition and subtraction of two fractions, proper and improper, with the same denominator; compound fractions with the same denominator; and simple proper fractions with different denominators.
- (f) multiplication of two fractions
- (g) addition and subtraction of decimal fractions having two places.

Unit-III. Measurement:

- (a) addition and subtraction of compound qualities.
- (b) liters, milliliters, grams, kilograms, kilometers, meters, centimeters and millimeters.
- (c) weeks, days, hours and minutes.

Unit-IV. Geometry:

- (a) measuring a line segment in centimeters and millimeters.
- (b) concepts of angle, boundary and region.
- (c) finding the perimeter of rectangular and square shapes.

Unit-V. Graphs:

Reading a picture graph.

GRADE FIVE

Unit-I. Roman numerals:

- (a) introduction of decimal fractions up to three places.
- (b) roman numerals up to 20 and 50, 100 and 1000.
- (c) divisibility, factors, multiples, and concepts of prime and composite numbers, highest common factor and least common multiplier of natural numbers.
- (d) the informal concept of associative property of addition and multiplication (involving fractions and

integers).

Unit-II. Algebraic Operations:

- (a) reducing fractions to their simplest form.
- (b) addition and subtraction of decimal fractions up to three places.
- (c) multiplication of decimal fractions by whole numbers.
- (d) multiplication of two decimal fractions.
- (e) division of decimal fractions by whole numbers.
- (f) division of decimal numbers by decimal fractions.
- (g) conversion of decimal fractions into common fractions; conversion of common fractions (with denominators of 2 and 5) into decimal fractions.
- (h) use of brackets in common and decimal fractions.
- (i) problems involving addition, subtraction, multiplication and division of common and decimal fractions.

Unit-III. Unitary Method:

Simple cases of unitary methods.

Unit-IV. Average:

Simple cases of averages.

Unit-V. Geometry:

- (a) concepts of angle, right angle, right triangle and quadrilateral.
- (b) determining the area of a right triangle.
- (c) determining the perimeter of a triangle and various types of quadrilaterals.
- (d) concepts of cube, cuboid, volume and its units.

Unit-VI. Graphs:

Reading bar and line graphs.

4.2 Mathematics Textbooks

Mathematics textbooks published in all provinces of Pakistan adhere closely to the unit topics listed by chapter name in the technical specifications of the curriculum. Only minor variations can be found in the textbooks of the various provinces. Below the general format of the NWFP texts is presented for illustration and the variations from this text noted for the books of other provinces.

4.2.1 Grade One mathematics texts:

The grade one textbook for mathematics in NWFP consists of the following chapters:

One deals with the concepts of more than, less than, smaller, bigger, high, low, heavy, light, long and short.

Two requires writing numbers from 1 to 100 randomly and in order, and learning the concept of zero, one-half, one-quarter, etc.

Three teaches the addition of one digit and two digit numbers with a sum not more than 50.

Four teaches children to recognize Pakistani currency notes.

Five teaches the days of the week.

Variation, though small, occurs across provinces. For example in Baluchistan, content is divided into sub chapters covering basically the same material except that addition is not extended beyond a sum of 18. In Punjab the content is divided into nine chapters covering the same materials except that addition is not extended beyond a total of 99. In Sind the content is also divided into nine chapters and covers the same material in a different order. The colored illustrations in the texts of various provinces also differ from one another.

In most provinces, mathematical sequences appear in written form from left to right or in vertical form from top to bottom. However the NWFP textbooks show horizontal mathematical sequences written in the opposite direction from right to left.

The texts of Punjab and Baluchistan have no general instructions for teachers and parents, but the NWFP textbook gives brief instructions about the contents and the methods recommended to teach them. The Sindi text provides general instructions for teachers on page four and more detailed instructions at the start of each new unit.

4.2.2 Grade Four mathematics texts:

The grade four mathematics text book of NWFP includes the following chapters:

One teaches students numbers up to a crore, using the written form for numbers as they appear in the Urdu language. The chapter includes the concepts of even and odd numbers.

Two teaches multiplication and division up to 3 digit numbers.

Three teaches the basic use of brackets.

Four includes practice in addition and subtraction, comparison and short forms of fractions, improper fractions, and compound fractions.

Five teaches multiplication of fractions.

Six teaches decimal fractions and their addition and subtraction.

Seven teaches addition and subtraction of compound quantities such as volume, weight and time.

Eight includes materials on geometry such as measuring line segment, rays, angles of various types, triangles rectangles, circles, squares and the area of squares and rectangles. Nine teaches the reading of graphs.

In Baluchistan textbook contents are basically the same as the contents of NWFP texts but instead of nine chapters the materials are divided into eight chapters. Multiplication is taught up to 3 digit numbers using 10, 100 and 1000, while division is only taught up to two digit numbers.

The mathematics textbook for grade four of the Punjab also divides the content matter into nine chapters. The only difference with the NWFP book is that Chapter Nine of the Punjab book includes illustrative figures, colored pictures, and graphs. The book explains concepts with illustrative examples, followed by exercises for the students. In Sind the same topics are distributed into ten chapters and the length of the chapters tend to be longer than those in other provinces. Pictures and figures are black and white. The Sind book includes considerably more pages than other texts.

4.2.3 Grade five mathematics textbooks

The grade five mathematics textbook of NWFP includes the following chapters:

One presents roman numerals up to 1000.

Two teaches lowest common multipliers and highest common factors.

Three teaches common and decimal fractions, their conversion to each other and four fundamental operations that can be performed on them. The chapter also teaches how brackets may be used when working with fractions.

Four teaches children to solve problems using the unit method.

Five teaches the computation of averages.

Six instructs students in concepts related to such geometrical figures as angles, parallelograms, triangles (areas and volumes, cubes and cubelike figures).

Seven introduces line and bar graphs.

Almost the same materials are presented in the grade five mathematics textbooks of Baluchistan. However, the book is divided into nine chapters instead of the seven chapters of the NWFP book. The material on fractions is divided into two chapters which give more detail than texts of other provinces.

In the Punjab the same contents are divided into seven chapters with colored diagrams and pictures instead of black and white as in NWFP. Each chapter contains illustrative examples and exercises.

The Sind textbook is almost double the length of the texts of other provinces with forty-nine exercises. The topics, however, cover the same subjects. The books have black and white

pictures and figures. More practice materials are given in this book.

4.3 Timetable. The units of mathematics for each grade are expected to be completed over the period of a school year according to a specified schedule. During visits to schools, supervisors often check whether a teacher is working according to the time table. A teacher who is behind may be reprimanded and told to speed up the progress of the class. One who is ahead may be commended. Such practices encourage the teacher to move as quickly as possible through the syllabus. Any time "saved" in this way is used for review. Review before final exams may occupy one to three months.

A typical time table is similar to that used in NWFP. By the end of August in grade one, the child should have completed Units I-II and by the end of December Units III-V. In grade four, by the end of August, students should have completed Unit II (d), the use of brackets, and, by the end of November, Unit III of measurements. In the months of December and January, they are expected to complete the units on geometry and graphs. The month of March is reserved for review and examinations.

The timetable for grade five mathematics indicates that by August 31, the child should have completed at a minimum the common fractions and if possible up to the section on algebraic operations. In the months of September through November they should finish the material on unitary methods and averages. The final units on geometry and graphs should be completed by the end of February. The month of March is again used for review and examinations.

4.4 Mathematics Testing in Grade Five

Mathematics tests at the primary level are normally developed by teachers in their classrooms or for their schools and also administered by them. Only at the fifth grade level is it possible to find, in most provinces (Punjab, NWFP and Sind) tests that are developed independent of the local classroom teacher. It is therefore difficult to make comparisons across provinces, or even within provinces across district lines. The following examples of district tests are given for illustrative purposes only, to show the relationship between testing, primary curriculum objectives, and textbook content.

The first example is a scholarship examination from the district of Sahiwal in Punjab. The test was developed under the supervision of the district educational authorities and was administered by them at the end of the 1987 school year. This grade five mathematics test consisted of six questions totalling a possible 50 marks. The time allowed to complete the test was one and half hours. Question one consisted of five sentences with blanks where the child was asked to supply the missing information. The other five questions required the child to perform calculations. Question 2 was split in two parts for

operations involving compound and decimal fractions. Question 3 required calculations of highest common factor. Questions 4 and 5 consisted of simple arithmetic problems. Question 6 required the child to find the area of a park and the expenditure necessary to convert it into a grassy plot.

Overall the test is based closely on textbook content. Question 1 is a test of a child's rote knowledge of textbook content. Questions 2-6 require a child to demonstrate computation and calculation skills derived directly from lessons in the book. Overall, two types of learning are tested: the acquisition of subject knowledge and the application of principles to original problems not found in the text.

Another example of a mathematics test is from the district of Okara in the Punjab. It is the terminal examination for all students of the district in the year 1987 and was administered by the DEO at various centers of the district on the same day. Those students who obtained the highest marks received scholarships. In the district of Okara there is no distinction between the fifth grade promotional exam and the scholarship exam. The test has a total possible score of forty. The test time is not mentioned. It has 3 questions. Question one consists of two parts; part one has five marks. Children are asked to write answers to such questions as how many radii and diameters are in a circle and whether those are equal in length. Part b of question 1 asks the child to calculate the area of a rectangle and the cost of planting it with grass. Question no. 2 asks the children to prepare an account of the annual income and expenditure of a factory laborer to find out his profits or losses. Question 3 consists of three parts having 5 marks each. Part 1 asks for calculations; part 2 asks about kinds of fractions and part three requires the child to identify the lowest common factors of given numbers. The full text of the exam can be found in Annex A.

5. Urdu

5.1 Urdu curriculum

The Urdu curriculum for grades one through five is intended to develop the skills of language literacy. For most children in Pakistan Urdu is a second language. Its acquisition is important politically as a means of unifying national communication and individually as a means of opening employment opportunities which require Urdu.

5.1.1 General objectives. The general objectives for Urdu at the primary level include the following. The children should:

- (a) recognize and distinguish between objects with concentration.
- (b) differentiate between difficult sounds.
- (c) speak with creative and knowledgeable ability, using

- correct pronunciation and accent.
- (d) read with comprehension and pleasure at discovering new things.
- (e) write with correct spelling and good handwriting.
- (f) draw correct conclusions from various items of content.
- (g) use and remember knowledge learned.
- (h) use basic language and understand its construction.
- (i) develop the habit of reading correctly and supplementing texts with other books.
- (j) love the Urdu language and feel proud of it.
- (k) become aware of and develop pride in national culture.
- (l) develop a concern for Islamic teaching and practices.

5.1.2 Specific objectives. The general objectives of the Urdu curriculum state the broad themes for the subject area while the specific objectives provide more detailed information about content areas. For illustrative purposes here, we present the objectives for grades one, four and five. Under the following headings the child should be able to do the following:

GRADE ONE
Observation

- (a) know the names for things in his home or school (e.g. toys, pictures, models), the names for activities (e.g. eating and drinking), and the names for things of general use.
- (b) know how to use the items mentioned and be able to talk about them.
- (c) differentiate colors, sizes and moving things.
- (d) recognize the letters of the alphabet and identify words of the same or different sounds.

Listening and Inference:

- (a) differentiate different kinds of sounds e.g. animal sounds, sounds of falling, colliding and breaking things, as well as indirect sounds.
- (b) distinguish similar sounds of the alphabet.
- (c) listen patiently and quietly.
- (d) listen to and act upon verbal instructions.
- (e) understand simple conversations with audio equipment.
- (f) sense the feelings of others from the way they speak.

Speaking:

- (a) discuss for at least three minutes, topics of interest to him: his home and himself.
- (b) speak without fear or hesitation.
- (c) should not speak irrationally.
- (d) should not speak repetitiously.
- (e) speak at a normal speed with proper accent.

- (f) should not talk in too low a tone or too quickly.
- (g) tell a story and sing a song.
- (h) repeat conversations with others.

Reading:

- (a) recognize words and letters of the alphabet with the help of pictures, written letters and with the help of sounds.
- (b) understand meanings of words.
- (c) read with a low and high voice.
- (d) find amusement in reading a picture story.
- (e) find enjoyment in reading a small, simple poem.
- (f) read a short story.
- (g) acquire information about animals, birds, plants and toys.

Writing:

- (a) draw straight, angled and curved lines with chalk and pencil.
- (b) be aware of the importance of punctuation.
- (c) recognize capital and small letters.
- (d) write letters and words properly.
- (e) know how to copy letters which he sees.
- (f) sit properly while writing.
- (g) practice the writing of simple letters and words.
- (h) make a circle correctly.

Observation:

The child should be able to deduce effects and connect related events. The teacher should help the child to understand the consequences of acts such as starting fires, falling from heights, or using a knife improperly.

Interpersonal experiences and feelings:

In grade one, the child should spend most of the time talking freely. The child should:

- (a) have a chance to talk about his/her toys, relatives and home.
- (b) describe the environment of his/her school.
- (c) sing songs and tell stories which interest him/her.
- (d) be able to give his/her home address.

Vocabulary:

- (a) use general words appropriate to his/her age.
- (b) constantly increase his/her vocabulary.

Reading habits:

Children should develop good reading habits in grade one. These include sitting in a proper position while reading, holding the book a proper distance from the eyes, not moving the body and not using the fingers to mark the place on the page when not necessary.

Love of Urdu:

- (a) learn not to consider Urdu an alien language.
- (b) be able to talk about general subjects in Urdu.

Awareness of national culture:

- (a) be conscious of being a Muslim and know about Muslim nationhood.
- (b) consider the Islamic way of life the best of all ways.
- (c) believe in the integrity of Islam.
- (d) respect the Prophet Muhammad (Peace Be Upon Him), His "Sahabas" (companions), His family and religious leaders.

Concern for Islamic teachings and practices:

- (a) be aware of the God-given fundamental principles of Islam i.e. Haj, Zakat, Roza (Fasting), Namaz, Tauhid, Risalat.
- (b) should say the name of the Prophet Muhammad (Peace Be Upon Him) with full respect and believe that he was the last prophet and the greatest man of the world.
- (c) fully respect the Quran-i-Hakim believing it to be the last book revealed from God.
- (d) learn not to disgrace the Quranic verses by learning how to take proper care of the Quran.
- (e) learn to act upon Islamic teachings.

Civic sense:

- (a) greet friends and elders properly by saying "Salam".
- (b) get permission to come and go from the classroom.
- (c) use the following words Shukria (Thank you), Mehrbani (so kind of you) Jee, Jeehan, Jee Nahin (all words of respect).
- (d) seek permission, using the proper words, when he wants to use another's things.
- (e) learn to sit and stand respectfully before elders.

GRADE FOUR

Observation:

- (a) travel to historic, important, and commercial places of interest to learn about them.
- (b) be able to point out the missing parts of incomplete pictures, models and other objects.

- (c) write a story illustrated with simple pictures.
- (d) see and appreciate natural beauty, and be able to express appreciation in simple words.

Hearing and inference:

- (a) listen to others with concentration.
- (b) explain a moral lesson derived from a story or an incident.
- (c) recall passages heard over a radio, or from a tape recorder.
- (d) develop greater powers of concentration than he/she possessed in the previous grade.
- (e) repeat meaningful discussions held with others.
- (f) memorize the verses of a poem he/she finds interesting.
- (g) recognize irrelevant phrases in a speech or a talk.
- (h) speak with correct accent and pronunciation.

Speaking:

- (a) learn a standard accent and pronunciation in Urdu.
- (b) be able to adapt his/her accent to describe an amusing incident or express sorrow, questioning, delight, disappointment or enthusiasm.
- (c) explain his/her point of view in appropriate language at a normal speed.
- (d) participate in discussions of at least ten minutes.
- (e) deliver a speech learned by heart.
- (f) express his/her views without hesitation.
- (g) tell a story with the help of a picture.
- (h) convey his/her feelings in simple language.
- (i) learn at least four national songs by heart.

Reading:

- (a) read lengthy passages with concentration.
- (b) translate passages into his/her own words.
- (c) read a passage quickly without changing its meaning.
- (d) develop good reading habits.
- (e) be able to read newspapers, children's magazines, announcements, and handwritten materials such as letters and acknowledgements.
- (f) be able to study independently.
- (g) get enjoyment from reading poems and remember verses which interest him/her.
- (h) be able to choose and present books he/she likes.

Writing:

- (a) be able to prepare a pen for use (on a board).
- (b) participate in contests of good handwriting.
- (c) write dictation accurately.

- (d) write an essay of a few sentences about simple letters, a story, an event, animals or some other interesting subject.
- (e) make at least three memorable entries of daily events in his/her diary.
- (f) write a story, a song or a poem from a book or magazine and write summaries of lessons from a textbook.
- (g) prepare posters with pictures to be hung on the walls of the classroom.
- (h) write words on the blackboard.
- (i) correct mistakes in the writing of his/her fellow classmates.
- (j) list words of similar sounds.

Extrapolation:

The child should be able to learn something important from each lesson, lecture, or activity and apply this lesson to his/her life.

Examination and observation:

- (a) present oral or written information about his/her religion and country.
- (b) tell or write about the places he/she has seen.
- (c) express his/her goals for the future.
- (d) write a simple story or give a talk.
- (e) include his/her own views in writing and speeches.

Vocabulary and language structure:

- (a) differentiate verbs and adjectives.
- (b) become acquainted with the relation between active and passive verbs.
- (c) give examples of the use of adjectives (without having to use the term abstractly).
- (d) be able to use pronouns (without using them abstractly).
- (e) be able to identify synonyms and antonyms of words and words which start with the same letter.
- (f) understand the use of idioms.
- (g) write words with correct spellings.
- (h) know how to use a dictionary.

Reading habits and supplementary reading:

- (a) develop good reading habits.
- (b) read newspapers, magazines and children literature.
- (c) choose books of interest to him/her.

Love of the Urdu language:

- (a) become aware that Urdu is a symbol of unity in the

- country.
- (b) be aware of the close relationship that exists between Urdu and the local languages.
 - (c) be proud of speaking Urdu correctly.
 - (d) enjoy studying Urdu books.

National culture:

- (a) learn about the historical background of Pakistan.
- (b) be proud of and follow an Islamic way of life and learn Islamic teachings.
- (c) be aware of the events that led to the creation of Pakistan.
- (d) prefer homemade things.
- (e) acquire knowledge about Islamic and national heroes and learn to speak of them respectfully.

Respect for Islamic teachings and practices:

- (a) read the Quran and show it respect.
- (b) learn to take care of his/her books.
- (c) enjoy listening to events of Islamic history.
- (d) love Pakistan as an Islamic State.
- (e) show respect for mosques, other places of prayer and religious leaders.

Civic Sense:

- (a) take interest in the safety and cleanliness of the school building and materials.
- (b) be proud of working with his/her hands.
- (c) love animals and protect plants.
- (d) further national interests above his/her own interests.

GRADE FIVE

Observation:

- (a) visit historical places and general places of interest to collect information that he finds interesting.
- (b) write an illustrated story.
- (c) explain to his fellow students about daily events and functions.

Hearing and inference:

- (a) be patient when talking with others.
- (b) understand others with ease.
- (c) find it enjoyable to listen to audio equipment.
- (d) be able to understand meanings from audio equipment and correct his/her accent by listening to this equipment.
- (e) listen to the telephone and understand the message.
- (f) be able to send messages from one place to another.

Speaking:

- (a) be able to talk about his/her experiences and express his feelings easily.
- (b) be able to express his/her ambitions and needs in an appropriate way.
- (c) be able to speak with a correct accent.
- (d) be able to make a speech in school assembly of at least two minutes.
- (e) be able to deliver a speech on a specific topic with enthusiasm and feeling in about four minutes.
- (f) involve himself/herself in discussions and give clear reasons for his/her point of view.
- (g) be able to talk about problems in his/her own area of interest.
- (h) be able to relate his/her experiences and views on a given topic logically and consistently.
- (i) be able to talk about relatively complicated pictures and scenes.
- (j) be able to recite the national anthem, a moral poem, story or prose appropriate to specific occasions.
- (k) take part in drama.

Listening:

- (a) be able to determine the main points of articles, manuscripts, newspapers and magazines.
- (b) develop proper reading habits.
- (c) find enjoyment in reading relatively long books.
- (d) learn his/her favorite poems by heart.

Writing:

- (a) learn to write paragraphs in good handwriting.
- (b) be able to spell correctly.
- (c) know how to use periods and question marks at the end of a sentence.
- (d) write letters, acknowledgements, and invitations and know how to fill in a money order form.
- (e) be able to write about his/her observations and feelings.
- (f) prepare posters for his/her classroom.
- (g) be able to write easily on a blackboard.
- (h) be able to write a story, describe an event or write a poem.
- (i) be able to write essays which are easily understood.
- (j) prepare a notebook of favorite verses.

Expression:

- (a) be aware of relationship between events.
- (b) be able to draw appropriate conclusions from incidents.

- (c) act appropriately keeping in mind the possible implications of specific events.

Use of information and observation:

- (a) love and respect Islam and Pakistan.
- (b) present facts about his/her country.
- (c) explain the merits of his religion
- (d) describe suitable religious environments, social activities, fairs, games and natural sceneries.
- (e) deliver speeches or write essays on topics of national and international interest.
- (f) express his/her desires for his/her future.
- (g) take part in discussions, and express his/her own point of view and show respect for others' points of view.
- (h) participate in speech contests.

Vocabulary and language:

- (a) write correct sentences.
- (b) complete an unfinished story with the help of hints given to him/her.
- (c) know the definitions and uses of nouns, verbs and pronouns.
- (d) develop a satisfactory vocabulary of synonyms, antonyms and words of similar pronunciation.
- (e) know how to use a dictionary.
- (f) point out the similarities between words of Urdu and the local language.
- (g) know how to use idioms and phrases.

Study habits and supplementary study:

- (a) improve his/her study habits.
- (b) increase his/her speed in reading.

5.2 Urdu Textbooks:

The curriculum charges the writers of Urdu textbooks to keep in mind the general and specific objectives for each grade when developing the content materials for the books, and to consider the age, interest level and variability in individual capacities and attention spans of children.

5.2.1 Grade One Textbook: Two books are used for instruction in grade one in almost all provinces. The first is the basic book or primer which contains the letters of the Urdu alphabet. When letters with various written forms are first presented in the primer, they are accompanied with examples of the written forms as they appear in initial, medial or final positions. Along with

the forms of the letters, short sentences are presented to show children how letters are joined in words and phrases.

Book One is the main book in Urdu required for grade one and in many schools a child must have completed this book in the Kachi class before being formally permitted into the Pakki, grade one, class. In the province of Punjab the book consists of twenty lesson units with seven poems. The prose part starts from the lesson called "Our Prophet". Other lesson titles include "My Book", "Bano's House", "A Good Day", "Our School", "A Ray of Light", "Dara's Village", "Glow Worm and Sparrow", "Thirsty Crow", "Brother and Sister", "The Sun" and "Mian Mian Mithu".

Poems are given serial numbers 1, 4, 9, 12, 14, 16 and 19. The first poem is "Prayer", the second is "Baby Nightingale," then, "Jago Jago" (Wake Up, Wake Up), "Aao Bacho, children, "Come To Me", "Choon Choon" (the sound a chick makes), "My Doll" and the Postman". The poems generally have from five to ten verses. The themes are illustrated with colored pictures on all pages.

There is a list of contents on page one with serial and page numbers. The title page is beautifully colored and is composed of better paper than the rest of the book. On the back page the national anthem is printed though it is not included in the contents. At the end of each lesson or at the bottom of certain pages, from three to twelve words are written in bold letters to increase the vocabulary of the children. The textbook is printed by the Punjab Textbook Board, Lahore and was approved by the National Review Committee in the Federal Ministry of Education. There are 33 pages.

Book One in Baluchistan is about the same size as the Punjabi book with 32 pages. There are also two poems, "Baby Nightingale" and "Aao Bacho Sunno Kahani", which are the same. A lesson entitled "Thirsty Crow" is similar in the two books but varies in the wording of the texts. The Baluchistan book contains colored pictures painted by different artists. Each lesson is only one to two pages in length. The book for Baluchistan has a few vocabulary words and some practice writing at the end of the lesson. On the back page a national song is printed instead of the national anthem. This song is included in the table of contents. Another lesson "Our Home" is different from the Punjabi Book but provides children the same kind of information about homes. This book also has colored pictures on each page to illustrate the subject matter of the lesson.

Book One in NWFP contains thirty two pages. The dimensions of the book are the same. The first chapter, as is the case in the other provinces, is a lesson about "praising God", but the wording varies. The other lessons like "Thirsty Crow", "A Good Boy", "Our Prophet" and "My Book" use the same chapter titles as the Punjab textbook but differ in wording. Almost every page has a colored picture. The back page contains a poem included in the table of contents. The book has an attractive title page.

The Sind textbook for grade one has twenty eight pages. The table of contents on page three lists the full nineteen Urdu lessons the children should complete in the space of the year.

Eight lessons are poems and the other eleven lessons are prose. There are two poems in praise of God on the beginning and end pages. On the back page the national anthem is printed. In this book the lesson "Thirsty Crow" becomes "The Wise Crow". A poem "Obey the Elders" is the same as that in the Baluchistan book. The Sind book is written in larger script, has colored pictures for illustration but has paper inferior in standard to that of other provinces.

5.2.2. Grade Four Textbooks: Urdu textbook writers for grade four are similarly urged to write according to the objectives of the curriculum noted earlier.

The grade four Urdu book of Punjab serves as a typical example. It contains one hundred and twelve pages with thirty nine lessons, including eleven poems, one picture story and a three act play. A list of the chapter titles can be found in the Annex.

Typical of all the provinces is a chapter called "Hamd (Praise of God)"; all grade four books have "Hamd" as the first chapter though the wording of the text may differ. "Pakistani Children" is another common topic of all the provinces, except NWFP. Though the title is the same, however, the content of the units may differ, for the purpose of the unit is for children of each province to learn about the customs of other provinces as well as their own province. All books of grade four include a poem about the father of the nation, Quaid-i-Azam. The subject of world populations is also found in all books to introduce the child to ideas about growth of world populations and their cultural development. The growth of the population in Pakistan in its historical perspective and the consequences of over population are highlighted in this chapter.

The textbook for Sind has one hundred pages with thirty-nine lessons, including ten poems and a three-act play (the same as in Punjab). There is no picture story in this book, however. The Sind book has chapter titles, "A Letter to Father" and "Sympathy" (a drama) in common with the Punjab textbook.

The grade four Urdu textbook for NWFP includes twenty-eight lessons of eighty pages including seven poems and twenty-one prose lessons. There are no plays or picture stories. Baluchistan's textbook is also eighty pages with thirty-one lessons including ten poems.

The paper used in the textbooks overall is of good quality by Pakistani standards. Each of the books has colored pictures to illustrate the lessons with the exception of the Sind textbook which has black and white illustrations.

At the end of each lesson there are exercises with from about 5 to 10 questions to determine if the child has grasped the content knowledge he is expected to learn. Exercises may ask the child to give the meanings of words, to use words in sentences, to tell a similar story to that in the text, to answer grammatical questions about singular, plural, masculine, feminine and other aspects of syntax, or to compose short essays. All

these questions are intended to develop the child's language skills as called for in the curriculum objectives for the grade.

5.2.3 Textbooks for Grade Five: For illustration of grade five texts we give an example from NWFP. The book has one hundred and twenty pages divided into thirty-seven lessons, and including nine poems. The first chapter is "Hamd" (Praise of God), as is customary. The second lesson "Rehmat-i-Alam" gives some examples of the kindness of the prophet (P.B.U.H). Similar lessons have been included in textbooks of the other provinces. Though the topic is the same, however, the examples given are derived from different incidents. "A National Song" is included in the NWFP book as in other provincial books. "Silk Route" (The Karakorum Highway) is another common topic of these books. Allama Iqbal's famous poem "The Prayer" is given at the end.

The book includes no dramas nor any dialogues. Pictures are produced in black and white. The book has an attractive title page and clear printing. Every lesson has from four to ten questions in the exercises given at the end of each lesson. The exercises are meant to increase the skills of children in the reading, writing and comprehension of Urdu. The content of the lessons is intended to instill in the student the desire to worship God Almighty, to follow the traditions of the Prophet (Peace Be Upon Him), to respect national heroes, to be aware of Pakistani history and specifically of the Pakistan movement, to appreciate the integrity of the Muslim Ummah and to learn about the development of the human being in science and culture. All these topics therefore relate directly to the objectives listed in the curriculum.

The grade five Urdu book for Sind has one hundred and twenty pages. There are thirty-nine lessons, including twenty-eight prose lessons, eleven poems, and a three-act play. It also includes an essay in the form of a dialogue which describes the historical role of Multan, a famous city of Pakistan. The topic "Silk Route" this time is found under the title "Karakorum Highway". This Sindi text has a poem "Jago aur Jagao" in common with the NWFP book. The final unit is Allama Iqbal's poem "The Prayer". Each chapter has exercises of about two to eight questions. There are black and white pictures. The print of the book is clear and the paper used is good by Pakistani standards. Baluchistan's textbook has ninety-six pages, divided into thirty-eight lessons and including twelve poems. The dialogue in this text concerns "The Haj Pilgrimage". Other lessons which have titles in common with previous provincial texts, vary in the wording. There are colored and black and white pictures in all lessons. The exercises at the end of each lesson normally contain from three to six questions. The exercises give the child practice in grammar, in writing simple letters, stories, applications, acknowledgements and short essays. The paper used is good by Pakistani standards and the printing is clear.

Punjab's textbook for grade five has the greatest number of pages with one hundred and fifty-two pages divided into forty-two

lessons, and fourteen poems. Here again is found the "Hamd", "Rehmat-i-Alam", a prayer, and a national song. There is no play but there are dialogues on the themes of the "Secret of Development", "The National Anthem" and the topic of the "K-2". The book has more materials for reading and practice than other grade five books. In the exercises the child is asked to write essays on various topics, and use words and idioms in sentences he has created.

All the four books have a "Table of Contents" at the beginning and "The National Anthem" printed on the back page. Other information including a copyright of the relevant textbook board which has prepared the text, the name of the printers, those who reviewed the texts, the names of writers and publishers, the number of copies printed, the code number, serial number and price of the book can be found on the back page or on the pages inside the title page.

5.3 Urdu Timetables

The authorities provide timetables indicating the time teachers should give to teaching the various textbook chapters of Urdu.

5.3.1 Grade one Urdu timetable. In NWFP province in grade one, all the units of Urdu are intended to be completed over the period of a school year according to the following schedule. By the end of August the child should have finished about half of the book, and by the end of December the whole book.

5.3.2 Grade four Urdu timetable. The grade four Urdu timetable for Punjab directs teachers to complete the first nine chapters of the text, including the exercises at the end of each lesson, by the end of September. The child should understand the concept of noun, the meaning of new words, letters and how to apply the knowledge. From October to November he/she should complete the text through lesson twenty-six and, by the end of February, the whole book including the exercises in each lesson.

5.3.3 Grade five Urdu timetable. The grade five Urdu timetable for Punjab states that the child should have completed the first nine lessons of the text by November. By the end of February, he/she should have completed thirty-three lessons and the whole book by the end of February. He/she should also have completed the exercises at the end of each lesson.

5.4 Urdu Testing:

Grade One Urdu tests assess two basic skills, reading and writing. Each school prepares and administers its own test. The class teachers prepare the questions and administer the tests themselves under the supervision of a head teacher. Here we present an example of a Federal Area test based on the same

textbook as that used in Punjab. The test has twenty-five total marks distributed into ten marks for reading and five marks for good handwriting (two sentences are given which must be copied in good handwriting). Five marks are reserved for questions where the student must complete words by inserting missing letters. The last five marks are given for dictation. It is clear from the distribution of points that the greatest emphasis is on writing practice. Fifteen out of twenty-five total points are reserved for assessing these writing skills.

The items on the test directly relate to several general objectives for the primary level and to the specific objectives in the Urdu curriculum for grade one concerned with reading and writing. Most of the specific objectives in other categories such as listening, observing, civic sense, love of Urdu, etc, are not evaluated by this test. The significance of this fact is that teachers learn to consider reading and writing as the relevant goals of learning, and focus their instructional efforts toward building these skills.

An example of a grade five test is found in the 1987 scholarship examinations from the district of Sahiwal. Usually there are two types of tests given to grade five students. The first test is a promotional test and is prepared by district authorities and administered by them to all grade five students in the district. The test is unique in each district. Only those children who do well on the district exams compete on scholarship exams with other children of the same district .

The Sahiwal exam has a total of fifty marks and must be completed within one and a half hours duration. Question one consists of two parts (A and B) with one paragraph for each. The child must explain the paragraph in easy Urdu. Question two similarly contains two parts with each consisting of a verse of poetry. Children must explain these verses in their own words. Question three has three parts. In part one the child must write the meaning of words for the given five pair of words having the same sound. Part two requires opposites of the given words. Part three asks the child to write different kinds of sentences using given idioms. Question four requires children to select five words out of a list of words to write definitions and use in sentences. In question five the child is asked to write an essay on one of the following topics: "A Morning Walk", "My School", and "Quaid-i-Azam"(a national leader). To assess children's writing ability, ten words of dictation are included in the test.

Another example of the grade five examinations comes from the district of Bahawal Nagar in the Punjab province. It is the scholarship test for the year 1987. The test was intended to take one hour. A perfect score totalled forty marks. The first part of question one asks the child to give the meaning of a paragraph in simple words. Part two of question one again requires the child to give the meaning of two verses. Question two asks the child to show he/she knows the meaning of given words by writing them in sentences. In question three the child must provide the plural of given words in part one and in part two give words with the

opposite meaning for a set of six words. Question four asks about grammatical points and question five suggests two topics from which the child selects one to write an essay.

The major difference between the two types of tests is the greater difficulty of the scholarship examination. In this particular exam, less choice was given compared to the Sahiwal scholarship exam.

6. Conclusions

The primary purpose of this paper has been to describe the contents of existing curriculum documents, textbooks and formal exams without analyzing the merits of these elements of the educational system. However, it seems appropriate to comment on the features that characterize these materials. As noted earlier this paper was prepared as background for a classroom practices study. In that study we are interested in how curriculum, texts, and tests relate to one another and ultimately to the way they are used by teacher in the classroom environment. Well-designed materials can help compensate for teachers with limited capability and inadequate professional training. Inferior materials make it difficult even for good teachers to produce adequate results, especially if tests which are the measure of the system's success are geared closely to the content of the inadequate materials.

To summarize, the Pakistani education system has four levels of objective: (1) national goals, (2) general primary objectives for each subject, (3) specific primary objectives for each subject, and (4) unit level objectives for each grade and subject (in Urdu these unit objectives are stated in terms of titles for chapters). The first level is highly abstract, referring to such goals as "fostering in the hearts and minds", "loyalty", "creating awareness of...Pakistan and Islam", and "producing citizens". The second level, though focused more closely on subject matter is equally abstract, calling for "satisfying mathematical needs", "developing a disciplined mind," etc. These abstract subject objectives become more specific by the third level and highly focused by the fourth level. Sometimes, the lack of clear connection between the third level which is still often stated in behavioral terms and the content description of the fourth level makes it difficult to fully understand how the latter were constructed. Do the unit level objectives reflect the considered judgment of a team of educational experts that these constitute the body of knowledge and skills that will "satisfy the mathematical needs" of children?

One assumes that the purpose of compiling and publishing objectives is to focus the educational content toward specified outcomes. A test of this purpose would be to measure student learning with examinations or other assessment instruments which refer directly back to the skills and knowledge called for in the objectives. To prove effective as a measure such a test should be independent of the textbook content (though, because the

textbooks are also shaped by curriculum, one would expect test content that was parallel). Phrased as they are now in terms that are generally not measurable, it would be difficult to test the general and specific objectives by grade level and subject in this manner. It would not, however, be difficult to rephrase them in a way that would make them susceptible to measurement. This would require a consensus of educators on exactly what constitutes the requirements to meet each objective: what constitutes the behavioral manifestations of "satisfying mathematical needs", for example.

Unit level objectives even though stated in topical form are more specific, and it is easier to deduce measurable behavioral objectives from them. However, because textbook content is based so closely on these unit topics, the tests, which are also usually based directly on them, measure textbook content rather than the broader skills called for by the general objectives. The problem is compounded by the fact that teachers rarely refer to documents containing curricular objectives and, therefore, are not acquainted with larger goals beyond the textbook content. By default they end up organizing their teaching around the content of texts. When the tests, as we have seen, emphasize the textbook content, this focus of instruction becomes reinforced.

In general then, from review of the documents, three points seem clear. First, the way the present curricular documents are constructed and used makes it difficult to employ them as such documents are usually employed, to focus sharply all relevant components of the educational system, including texts, exams, teacher training, supervision and school and classroom management. Second, the phrasing of the curriculum in what is generally non-measurable terms makes it difficult to assess the strengths and weaknesses of the existing program by other than arbitrary means. Finally, the lack of clear direction may be a serious problem for classroom teachers who, without benefit of the curriculum documents, must decide on their own what lines of instruction to pursue. At present the most obvious path leads them to textbook memorization which in turn seems most likely to lead to success in currently constructed tests.

There are other questions that come to mind in examining the materials. Have writers given sufficient attention to whether the materials are appropriate to the age level of the children, or, in presenting the contents, to the logic of sequence and scope of the materials? Has sufficient consideration been given to the fact that most materials are written in a language that is not the first language of the students? Have the materials been tested to remove confusions, to see how well children can absorb relevant skills and knowledge, to know if teachers find them suitable and easy to use? Are there monitoring mechanisms which keep track of problems with the materials? Are there corrective feedback channels which lead to their continuous improvement? Are teachers trained specifically in how to use these materials, and managers and supervisors in how to implement the curriculum and manage instruction in specific enough detail? In theory,

these are the questions which should be asked of any system which organizes itself around curricular goals, instructional materials and examinations.

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The BRIDGES Project is directed by the Harvard Institute for International Development and the Harvard Graduate School of Education, under Cooperative Agreement No. DDP-5824-A-5076 with the Office of Education, Bureau for Science and Technology, United States Agency for International Development. The ideas expressed

ANNEX A
MATHEMATICS EXAM: Grade 5
District of Okara(Punjab) Annual & Scholarship 1987

Total marks 40.

Q-1-a How many radii are in a given circle? How many radii segments are there? How many diameters are there? Are all the diameters of the same length? (5 marks)

(b) A rectangular park has a length of 120 meters and a breadth of 100 meters. Inside and around the park a 10 meter broad road is to be constructed with the remaining to be planted in grass. Find out the total expenditures if the cost of building the road is Rs. 15 a square meter and the cost of planting grass is Rs. 3 a sq. meter. (10 marks)

Q-2-a A factory laborers' monthly pay is Rs. 375 a month. He gets a cost of living allowance of Rs. 75 twice a year and one bonus equal to his monthly pay in a year. His expenditures are the following:

Monthly ration Rs. 100; daily fresh food costs, on average, Rs.4; half-yearly expenditures for clothes Rs.190 and Rs.205; school books for children Rs.60 annually; quarterly water charge Rs. 15; monthly fuel Rs.31; and savings association Rs. 75/month. Make a budget of his income & expenditures for 365 days of a year and find out his monthly savings or losses.(10 marks)

Q-3-a A motor car consumes 1.52 liters petrol for a distance of 0.8 kilometers. Find out its fuel consumption for one km. (5 marks)

(b) Differentiate proper, improper and mixed fractions from the following: $\frac{12}{5}$, $11\frac{11}{12}$, $\frac{11}{5}$, $\frac{10}{7}$, $\frac{11}{13}$, $\frac{2}{13}$, $\frac{4}{5}$, $9\frac{5}{6}$, $7\frac{3}{4}$, $\frac{3}{17}$. (5 marks)

(c) Find the least common factor (L.C.M.) for the following: 84, 252, 336. (5 marks)