

Five “High Priority” Policy Questions About the Quality of Education and Their Transformation into Associated Specific Research Questions and Dummy Tables

In 1948, the United Nations adopted the Universal Declaration of Human Rights. This important document emphasized the need for a commitment to provide basic education for all. The main challenge facing countries at that time was to try to ensure that the quantitative expansion of education systems was sufficient to meet the need for universal basic education. While major efforts were made by all United Nations member states to address this objective, it is now quite clear that achieving success in this area will need to be viewed as a long-term task by the developing countries of the world.

The Jomtien World Conference on Education for All, which was held nearly half a century later, noted that there were still 100 million children without access to basic education, with a similar number of children failing to complete primary school. Even more saddening was the fact that, of those who gained initial access and successfully completed primary school, millions failed to acquire the requisite knowledge, skills and competencies needed for the fulfilment of life's demands. The 1990's has therefore seen the established goal of securing the quantitative expansion of education systems joined by the need to ensure that these education systems deliver high quality education.

From General Policy Questions to Specific Research Questions and Sets of Dummy Tables

Most education systems of the world are bounded by country-specific concerns that are interwoven with the social, economic, historical, and political environments in which they operate. At the same time, recent reviews of the educational research and educational planning literature show that it is possible to identify a set of fundamental policy questions associated with the quality of basic education that are common to many countries. In the following discussion, some arguments have been advanced in favour of this proposition for the Southern Africa sub-region. This sub-region includes many countries that share both a similar history and similar current conditions concerning such aspects as colonialism, socio-economic development, community health status, population

growth, and a widespread public demand for education that has outstripped the capacity of many governments to provide the resources required to maintain effective pupil learning. Indeed, in the area of primary schooling, it could be said that the countries of this sub-region have more educational policy concerns in common, than they have differences between them.

It was in light of this observation that the following question was recently posed by a number of African educational planners: "What are the general policy questions about the quality of education that are common to most countries in the Southern African sub-region?" The question, and some answers to it, were prepared during two IIEP seminars that were held in the Southern Africa sub-region during 1992 and 1993 (Murimba et al, 1994). These seminars were attended by educational planners drawn from eight countries and they were centred around the development of indicators of the quality of education. In order to develop these indicators it was necessary to commence with a series of systematic analyses of general policy questions that were uppermost in the minds of key decision-makers in the sub-region.

The educational planners involved in the two seminars commenced the analyses by interviewing decision-makers in ministries and by preparing lists of what were perceived to be the most pressing policy questions. These interviews included input from ministers, permanent secretaries, regional directors, and senior educational planners. An initial reading of these policy questions showed that the majority of them were focused on concerns about the quality of education that was being delivered through primary education systems.

During the two IIEP seminars, these questions were discussed and refined to form a short list consisting of five policy questions concerned with the quality of education. The five general policy questions were considered to be of "high priority" in most countries of the sub-region. These questions were then operationalized as specific research questions in order to provide clear guidance for the collection and analysis of data. The specific research questions were then linked to sets of dummy tables that provided a format for presenting data in a manner that provided valid answers to the specific research questions. The five general policy questions and their associated research questions and dummy tables have been listed below.

**Five "High Priority" Policy Questions About The Quality of Education and Their
Associated Specific Research Questions and Sets of Dummy Tables**

Policy Question 1: What are the baseline data for selected educational inputs to primary schools?

Specific Research Question 1a: What are the background characteristics of Grade 6 pupils?

Dummy Table 1a(i): The Means and Sampling Errors for Selected Pupil Background
Characteristics (Home-related)

Region	Age	Sex	Books at Home	SES	Meals	Parent Education
	Mean	Mean	Mean	Mean	Mean	Mean
	SE	SE	SE	SE	SE	SE
Region 1						
Region 2						
Region 3						
Region 4						
Region 5						
Region 6						
Region 7						
Region 8						
Region 9						
Region 10						
Nation						

Dummy Table 1a(ii): The Means and Sampling Errors for Selected Pupil Background Characteristics (School-related)

Region	Speak		Days		Extra		Homework		Repetition	
	English		Absent		Lessons					
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Region 1										
Region 2										
Region 3										
Region 4										
Region 5										
Region 6										
Region 7										
Region 8										
Region 9										
Region 10										
Nation										

Specific Research Question 1b: What are the background characteristics of Grade 6 teachers?

Dummy Table 1b: The Means and Sampling Errors for Selected Teacher Background Characteristics

Region	Age		Sex		Academic Education		Teacher Training		Teacher Experience		In-Service Courses	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
	Region 1											
Region 2												
Region 3												
Region 4												
Region 5												
Region 6												
Region 7												
Region 8												
Region 9												
Region 10												
Nation												

Specific Research Question 1c: What is the general condition of school buildings?

Dummy Table 1c: The Means and Sampling Errors for Selected School Building Background Characteristics

Region	Repair Status		Classroom Space		Toilet Provision	
	Mean	SE	Mean	SE	Mean	SE
	Region 1					
Region 2						
Region 3						
Region 4						
Region 5						
Region 6						
Region 7						
Region 8						
Region 9						
Region 10						
Nation						

Specific Research Question 1d: What level of access do pupils have to books?

Dummy Table 1d: The Means and Sampling Errors for Pupils' Level of Access to Books

Region	Classroom Library		School Library		Book Borrowing	
	Mean	SE	Mean	SE	Mean	SE
Region 1						
Region 2						
Region 3						
Region 4						
Region 5						
Region 6						
Region 7						
Region 8						
Region 9						
Region 10						
Nation						

Policy Question 2: How do the conditions of schooling compare with the Ministry of Education's own benchmark standards?

Specific Research Question 2a: How do the basic organizational features of schooling (such as, school size, multiple shift schools, class size, classroom space, and staffing ratios) compare with the Ministry's benchmark standards?

Dummy Table 2a: The Percentages and Sampling Errors for Schools Meeting the Ministry's Benchmark Standards on Organizational Features

Region	School Size		Class Size		Classroom Space		Staffing Ratio	
	%	SE	%	SE	%	SE	%	SE
Region 1								
Region 2								
Region 3								
Region 4								
Region 5								
Region 6								
Region 7								
Region 8								
Region 9								
Region 10								
Nation								

Specific Research Question 2b: How does the provision and condition of teacher housing compare with the Ministry's benchmark standards?

Dummy Table 2b: The Percentages and Sampling Errors for Schools Meeting the Ministry's Benchmark Standards on the Provision and Condition of Teacher Housing

Region	Location		Condition of Housing		Facilities								
					Electricity		Water		Radio		TV		
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	
Region 1													
Region 2													
Region 3													
Region 4													
Region 5													
Region 6													
Region 7													
Region 8													
Region 9													
Region 10													
Nation													

Specific Research Question 2c: How does the provision of classroom furniture and classroom supplies compare with the Ministry's benchmark standards?

Dummy Table 2c: The Percentages and Sampling Errors for Schools Meeting the Ministry's Benchmark Standards on the Provision of Classroom Furniture and Classroom Supplies

Region	Sitting Places		Writing Places		Chalk Board		Exercise Book		Note Book		Pencil		Ruler	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Region 1														
Region 2														
Region 3														
Region 4														
Region 5														
Region 6														
Region 7														
Region 8														
Region 9														
Region 10														
Nation														

Specific Research Question 2d: How do the academic and professional qualifications of teachers and school principals compare with the Ministry's benchmark standards?

Dummy Table 2d: The Percentages and Sampling Errors for Schools Meeting the Ministry's Benchmark Standards on the Academic and Professional Qualifications of Teachers and School Principals

Region	Teachers			School Heads	
	Academic Qualifications	Professional Qualifications	In-service Courses	Academic Qualifications	Professional Qualifications
	% SE	% SE	% SE	% SE	% SE
Region 1					
Region 2					
Region 3					
Region 4					
Region 5					
Region 6					
Region 7					
Region 8					
Region 9					
Region 10					
Nation					

Policy Question 3: Have educational inputs to primary schools been allocated in an equitable fashion?

Specific Research Question 3a: Have school "material resource inputs" (for example, classroom furniture, classroom supplies, school buildings, library facilities, etc.) been allocated in an equitable fashion (a) among administrative regions, and (b) among schools within administrative regions.

Dummy Table 3a: The Variation within and among Regions for Material Resource Inputs to Schools

Resources	Variation within Regions		Variation among Regions
	Region 1	----- Region 10	
Classroom Furniture			
Classroom Supplies			
Toilet Provision			
Library Facilities			
Classroom Space			
Teacher Housing			
School Buildings			
Nation			

Specific Research Question 3b: Have "human resource inputs" (for example, academically and professionally qualified teachers and school heads, experienced teachers, staffing allocations, inspector support, etc.) been allocated in an equitable fashion (a) among administrative regions, and (b) among schools within administrative regions.

Dummy Table 3b: The Variation within and among Regions for Human Resource Inputs to Schools

Resources	Variation within Regions		Variation among Regions
	Region 1	----- Region 10	
Teacher Academic Qualification			
Teacher Professional Qualification			
Teacher Experience			
School Head Academic Qualification			
School Head Professional Qualification			
School Head Experience			
Inspectors Visits			
Pupil/Teacher Ratio			
Nation			

Policy Question 4: What is the level of achievement for Grade 6 pupils overall and in the three main domains (narrative, expository, and documents) of reading literacy?

Specific Research Question 4a: What subset of items on the reading test are considered "essential" for a Grade 6 pupil to master if they are to move successfully to the next stage of education, and what are two cut-off points for this subset of items for "minimal" and "desirable" levels of performance.

Dummy Table 4a: The Essential Questions on the Reading Test

Reading Test Topics	Dimension	Number of Questions	Essential Questions
Tembo	N	5	4
Island	D	4	4
Oranges	E	4	4
Maria's Time Table	D	4	2
Grandpa	N	6	6
:	:	:	:
:	:	:	:
Total Number of Items		59	44
Desirable Level			XX %
Minimum Level			XX %

Specific Research Question 4b: What percentage of Grade 6 pupils reach minimum and desirable levels of mastery in reading achievement?

Dummy Table 4b: The Percentage and Sampling Errors for Pupils Reaching Minimum and Desirable Levels of Mastery in Reading Achievement

Region	Minimum Level		Desirable Level	
	%	SE	%	SE
Region 1				
Region 2				
Region 3				
Region 4				
Region 5				
Region 6				
Region 7				
Region 8				
Region 9				
Region 10				
Nation				

Specific Research Question 4c: What are the reading achievement levels of Grade 6 pupils on the narrative, expository, and documents dimensions.

Dummy Table 4c: The Means and Sampling Errors of Pupils on the Three Dimensions of Reading Achievement

Region	Narrative		Expository		Documents	
	Mean	SE	Mean	SE	Mean	SE
Region 1						
Region 2						
Region 3						
Region 4						
Region 5						
Region 6						
Region 7						
Region 8						
Region 9						
Region 10						
Nation						

Specific Research Question 4d: What are the reading achievement levels of different sub-groups of students (for example, sub-groups broken down by sex, region, socio-economic background, school location, etc.) and how do these levels compare with the minimal and desirable levels of mastery?

Dummy Table 4d: The Means and Sampling Errors of Different Sub-groups of Pupils

Sub-group	Narrative		Expository		Documents	
	Mean	SE	Mean	SE	Mean	SE
<u>Gender</u>						
Boys						
Girls						
<u>Socio-economic Level</u>						
Ver Low						
Low						
Moderately Low						
Moderately High						
High						
Very High						
<u>School Location</u>						
Isolated						
Rural						
Small Town						
City						
<u>Nation</u>						

Policy Question 5: Which educational inputs to primary schools have most impact on the reading achievement of Grade 6 pupils?

Specific Research Question 5a: Which pupil background characteristics are most strongly related to reading achievement?

Dummy Table 5a: The Means and Standard Deviations of Pupil Background Variables and Their Correlations with Reading Achievement

Variables	Mean	Standard Deviation	Correlation with Reading Achievement
Age			
Sex			
Books at Home			
SES			
Meals			
Parent Education			
National			

Specific Research Question 5b: Which teacher background characteristics are most strongly related to reading achievement?

Dummy Table 5b: The Means and Standard Deviations of Teacher Background Variables and Their Correlations with Pupils Reading Achievement

Variables	Mean	Standard Deviation	Correlation with Reading Achievement
Age			
Sex			
Academic Qualification			
Professional Qualification			
Teacher Experience			
In-Service Courses			
National			

Specific Research Question 5c: Which human and material resource inputs are most strongly related to reading achievement?

Dummy Table 5c: The Means and Standard Deviations of Human and Material Resources Input and Their Correlations with Pupils Reading Achievement

Variables	Mean	Standard Deviation	Correlation with Reading Achievement
<u>Human Resource Input</u>			
Teachers Academic Qualification			
Teachers Professional Qualification			
School Heads Academic Qualification			
School Heads Professional Qualification			
<u>Material Resource Input</u>			
Classroom Furniture			
Classroom Supplies			
Library Facilities			
<u>National</u>			

Specific Research Question 5d: After taking into account the different background characteristics of Grade 6 pupils, which "malleable aspects of the educational environment" (that is, those factors that are amenable to manipulation by educational planners) are most strongly related to reading achievement?

Dummy Table 5d: Partial Correlations with Achievement and Beta Coefficients for Different Home, Teacher, and School Characteristics

Variables	Partial Correlation with Achievement	Beta Coefficient
<u>Home Background</u>		
Parents Schooling		
Possessions		
Books		
Homework		
Parents Interests		
<u>Teacher Background</u>		
Academic Qualification		
Professional Qualification		
Lesson Time		
Approaches		
Testing		
<u>School Background</u>		
Distance		
Facilities		
Equipment		
Special Programmes		

Total Variance Explained = XX percent
