Namibia

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Topic: **Background Note on Education Indicators**

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Indicators of School Quality and Student Learning

The purpose of this note is to provide the Ministry of Education in Namibia with additional background on indicators of school quality and student learning, and on how these indicators may be employed to support the objectives of Namibia's education reform. This note describes two of the indicators that are presented in the "Namibia Basic Education Reform Program Policy Matrix" (the Matrix). The first is the Fundamental Quality Level indicator. This indicator is used to quantify and establish mechanisms to track progress on the quality of primary education services. The context for this indicator is Activity C.3 in the Matrix. The second type of indicator is the Expected Learning Outcomes. Indicators of this type define the expected competencies that fourth through seventh grade children are expected to achieve in core subject areas (math, science, English). The context for this indicator is Activity A.4 in the Matrix.

Indicators of School Quality

School quality indicators are the criteria used to determine how well a school succeeds in providing for student learning. These criteria may be established empirically, that is, they may be derived from scientific research findings. In the absence of relevant, country-specific research, criteria may be derived from the experience and wisdom of school managers and teachers. In the ideal, these criteria would include inputs, such as textbooks, teachers, or classrooms, as well as outcomes, such as promotions, educational achievement, and attendance patterns. At the minimum, they should include all relevant, measurable inputs.

The Fundamental Quality Level (FQL) indicator is a practical tool to operationalize school quality indicators in Namibia. The FQL would represent an agreed upon set of absolutely essential inputs and conditions (and in the longer run, outcomes) that a primary school needs to have in place to be considered capable of providing for student learning. Moreover, the FQL model suggests that a school needs to have all of these essential components to achieve the FQL status. These essential ingredients may include

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minimal requirements for students per textbook, the proportion of qualified or re-skilled teachers in the school, student/teacher ratios, etc. For example, the MOEC may determine that for a school to meet FQL standards, there should be between 35 to 45 students per classroom and per teacher; that there should be enough fourth through seventh grade English, math, and science textbooks such that one complete set of these books is available for every four students; that at least 20 percent of the teachers in the school has had recent inservice training, etc. A school that meets every condition <u>except for one</u> would not be an FQL school. For example, a school that has everything identified in the FQL standard <u>except for enough textbooks</u> would be considered below FQL. Without textbooks, the model suggests, a teacher cannot effectively teach.[1]

<u>Fundamental Quality Level and Financial Planing.</u> One of the valuable aspects of the FQL indicator is how nicely it can be linked to strategic financial planning. Planners can determine what additional inputs are needed to bring each sub-FQL school up the FQL standard. Planners can then assess the costs associated with financing these additional input requirements. In the end, every sub-FQL school can have an "FQL price-tag" attached to it, indicating the cost of raising it to FQL standards. Regional annual targets for the number of schools the MOEC plans to elevate up to the FQL can be derived from the list of "FQL price-tags" in every region, along with the actual budget resources available for school quality improvement. An additional step would be for the planners to add in to the equation an estimate of how much it would cost to maintain all FQL schools at the FQL level for one more year. This last component would represent annual maintenance costs associated with school quality.

In summary, the development of an FQL standard by the Ministry of Education and Culture will help assure that:

- there is a Namibian-specific definition of primary school quality and of the criteria for a "fundamental quality level" (FQL) school;

- this definition of school quality is readily understood, easily measured, and completely "transparent" to parents, communities,

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[1]A~~n~~ metaphor may help illustrate the idea of "FQL." Consider the preparation of a cake. The essential ingredients for a cake may be flour, milk, eggs, baking powder, butter, and sugar. Unless all of these ingredients are available, and available in the appropriate proportions, the cake will be "below standard," or unacceptable. To carry the metaphor one step further, the availability of these ingredients will not guarantee that a cake will be produced. They are necessary but not sufficient.

teachers, and education administrators.

- all new and existing primary education resources, such and books, qualified teachers, pedagogic aids, school furniture, etc., are allocated in mutually-reinforcing packages;[2]

- these complementary packages of inputs are distributed in an equitable fashion to schools in every region of the nation;

- FQL schools are available equitably, and will increase in number and proportion equitably across all regions;

- girls and boys alike, in every region, will have equitable access to FQL schools; and

- there is an objective methodology for appraising the costs of raising all schools to FQL standards, and of maintaining them at that level.

FQL standards are expected to evolve over time to include student outcome measures, such as the proportion of students in each school who achieve the Expected Learning Outcomes (see below) expected of their grade level. The participation of parents and communities in defining FQL criteria, in receiving FQL reports on the schools in their area, is critical to the overall effectiveness and sustainability of educational reform in Namibia.

Indicators of Student Learning

Expected Learning Outcomes. Expected Learning Outcomes are needed to ensure that all concerned parties have an established and agreed upon set of learning achievement standards for each grade level, and that they have the criteria to judge whether children at each grade level have mastered these educational competencies. Indicators of expected learning outcomes will guarantee that parents, teachers, students, curriculum developers, and school managers know and understand what children at each grade level (in grades 4 through 7) are expected to master and to be able to do at the end of that grade level.

Expected Learning Outcomes would be best structured as performance standards rather than pass scores on a standardized examination. This would suggest that an assessment of student achievement would result in a report saying something equivalent

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[2]The reader may contrasted this criterion with non-complementary distribution of inputs, such as when textbooks are distributed to one set of schools, trained teachers to a second set, and school furniture arrive at a third.

to: "87 percent of 7th grade completers can calculate the area of a polygon;" or "43 percent of 6th grade completers can write an effective business letter;" or 63 percent of 6th grade completers understand how AIDS is transmitted." Developing these performance standards will require a carefully planned, partially decentralized process that actively involves education experts, teachers, and parents.

Measuring Student Achievement. If the list of Expected Learning Outcomes is the indicator, then a national assessment is the instrument to measure national progress on this indicator. To determine whether and how well students perform with respect to these Expected Learning Outcomes, the Ministry of Education and Culture would need to develop a system to design, administer, analyze, and report on students' attainment of these outcomes. The implementation of a national assessment system will also require skilled experts, public processes, and time.[3]

Both of these actions--the definition of Expected Learning Outcomes and the development of a performance-based national assessment system--would represent a major effort and investment in primary education. Moreover, to assure widespread acceptance of these performance standards and the findings of national assessments of student achievement (*vis-à-vis* these performance standards), the importance of public involvement in the development of these indicators and systems cannot be understated. Considering this, it is likely that several years would be required to fully elucidate and implement these two actions.

At the same time, however, there is a tremendous interest in obtaining a better understanding of what children in Namibia's primary schools are learning today. In other words, the MOEC needs to report publicly on primary student learning acquisition across Namibia before the specifics of the Expected Learning Outcomes are delineated, and certainly well before the national assessment system is in place to routinely assess students' performance against these criteria.

This would suggest that the MOEC may consider conducting a rapid, small sample-based assessment of student learning achievement.[4] This survey will need to be completed and analyzed

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[3]Models of national assessment systems, and suggested guidelines for designing and implementing such a system will be made available by the A.I.D. office in Windhoek upon request.

[4]The International Institution of Educational Planning (IIEP) in Paris, and the Educational Testing Service (IAEP division) in Princeton are two institutions (among others) that are known to have successfully designed and administered rapid assessments of educational achievement in African countries.

before the 1993 school year begins. One purpose for such a study would be to obtain a baseline measure of student learning. In the future, it will be possible to statistically equate this rapid assessment with a more carefully designed national assessment (based on Expected Learning Outcomes), by assuring that at least a subset of the items to be included in the national assessment will provide for comparisons with the rapid baseline assessment.

In summary, the development of indicators of student learning, and tools to measure that learning, as discussed above, will assure that:

- the education community and the public have an objective measure of student learning competencies before the start of the 1993 school year;

- the education community and the public will have reached a clear understanding of the concrete educational performance objectives in the core subject areas for children completing each grade level;

- a national assessment system will be in place that

  (i) periodically measures the educational performance of students, *vis-à-vis* Expected Learning Outcomes, in every region and district;

  (ii) evaluates and reports on the progress of the nation's students in achieving these Expected Learning Outcomes in the key subject areas;

  (iii) identifies potential problems in achieving these outcomes (such as overly ambitious expectations, inadequate curriculum or instructional development); and,

  (iv) suggests policies and interventions to rectify these problems or to otherwise promote students' achievement of Expected Learning Outcomes.