

## New Developments in the National Examination System in Botswana

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Botswana is a small nation in Southern Africa with less than one and a half million people. Its examination system has evolved in response to political and social changes (Moahi, 1998). Botswana attained independence from the British in 1966. During the colonial rule, examinations in Botswana and most African countries were a selection mechanism for further education and limited job opportunities, and they functioned to legitimize and control the curriculum (Lewin, 1998). At independence, the British examination model was adopted wholesale. There were three examinations: (a) the Primary School Leaving Examination (PSLE) administered by the Ministry of Education (MOE) after the seventh year of schooling, (b) the Junior Certificate Examination (JCE) administered by the University of Botswana, Lesotho, and Swaziland after 3 years of secondary schooling until 1979, and (c) the Cambridge Overseas School Certificate (COSC) which was controlled and administered by the Cambridge Local Examination Syndicate at the end of senior secondary schooling until 1998.

Starting in the 1970s, massive educational expansion, public pressure for a relevant educational system, and international trends in assessment contributed to adopting a new examination approach that began implementation in the 1990s. Ten years of universal basic education were achieved at the beginning of the 1990s. As a result, the PSLE was no longer necessary because candidates automatically continued to junior secondary schooling. There were also changes in the curriculum. An academically oriented cur-

riculum for white-collar jobs shifted to a curriculum geared toward self-employment because not all primary and secondary school leavers could get jobs. Popular pressure was exerted on the education system to demonstrate recognition of the geographic, linguistic, and cultural diversity that exist among the country's students. The education program shifted from focusing on only the most capable students to attempting to educate all students. These factors generated a need for a balance between an academic and a practical curriculum.

These and other factors resulted in a change to a broad-based assessment model. For primary and junior secondary schooling, the government opted for a criterion-referenced testing (CRT) model for its national examinations. The Curriculum-Driven-Test-Development Model (CDTDM), one of the many varieties of CRT developed by Nitko (1989), was adopted, and its implementation started in the primary schools in 1992 and in the junior secondary schools in 1996. The thrust of the CDTDM is that students' scores are referenced to a well-defined curriculum domain that makes explicit the cognitive theories of learning and instruction, the instructional materials, classroom activities, content syllabus, and curriculum objectives and goals. An empirically based quality control procedure is then followed to produce national examination papers. In each subject, the student's examination results are reported as levels of performance in the form of letter grades.

Although the JCE follows a CRT model, the examination, nevertheless, retains norm-referenced score interpretations. The JCE results are used to select about 40% of the junior secondary school leavers for further education in senior secondary schools.

The new examination procedures also require the production of re-

ports that describe what the students can do at an appropriate level of specificity for different stakeholders. This aspect is not fully implemented at this time.

School-based formative and summative assessments of students are important components in the new examination model. The intention is to aggregate continuous assessment (CA) marks and the national examination scores to form a composite for decisions about individuals. Currently at the primary school level, formative assessment is done daily, weekly, or at the end of each instructional unit, mainly to identify individual student learning problems and to inform instructional planning. In practice, the majority of the schools use written tests given at the end of each unit. Some schools record a student's performance on each objective. The CA information is kept for all 7 years of primary schooling. Formative assessment has resulted in increased frequency of testing and recording, thus increasing the workload of the teachers and taking away time from instruction.

Regional or school subject panels develop school-based summative assessment. Teachers meet to create test plans and construct test items. Teachers report difficulty constructing test items that assess the higher levels of thinking assumed by the objectives. They also experience difficulty constructing assessments that evaluate students' usage of scientific process skills such as observation, demonstration, experimentation, and investigation. Major obstacles include large class sizes,

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the absence of appropriate apparatus and equipment, and a lack of expertise in assessing practical skills (Chilisa, 1998).

At senior secondary school, Botswana has opted to localize the COSC, modeling it after the International General Certificate of Secondary Education and the British General Certificate of Secondary Education. Implementation began in 1998 when senior secondary schools started using the first set of localized teaching syllabi. The teaching syllabi are accompanied by assessment syllabi that guide teachers in what and how to assess. Assessing a broad range of skills is emphasized, requiring teachers to use performance tasks such as projects, portfolios, demonstrations, experiments, and oral presentations. It is planned that, in time, this school-based assessment will form part of the final composite mark.

The new system attempts to report scores for a wider ability range than was done with COSC. The COSC examination reported on a 5-point scale (A-E); the new examination reports on a 7-point scale (A-G). Previously, candidates whose performance was lower than the COSC grade of E received no grade. There are also plans to replace group-subject certification, whereby

certification is dependent on a combination of grades from several different subject-matter examinations, with single certification of each subject (Ministry of Education, 1998).

In summary, new developments in the national examination system are: (a) developing outcome-based curricula; (b) emphasizing the importance of CA; (c) assessing on a wider range of ability; and (d) using examination outcomes for monitoring, evaluation, and accountability. A possible barrier to successful implementation is resistance by teachers due to (a) the increase in their workload, (b) their unpreparedness to deal with the innovations, and (c) the lack of equipment and teaching materials required to teach the objectives. Challenges include (a) training teachers for CA, (b) working out valid methods of combining CA and examination scores, (c) reconciling criterion referencing with norm referencing, and (d) creating national examinations that follow centrally specified syllabi while at the same time catering for cultural diversity. Given the dominance of the selection function of the examinations prior to and at the end of senior secondary school, assessment on a broad range of skills may well be abandoned for assessing skills that can be more objec-

tively and reliably measured. If that happens, teaching will become narrowly focused to those objectives that are featured in the examinations.

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