

Part II: National Perspectives

Chapter 2: Botswana

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Population (1993): 1,402,000

Population Growth Rate (1960-93): 3.3% per annum

Land Area: 581,630 square kilometres

GNP per Capita (1994): US\$2,590

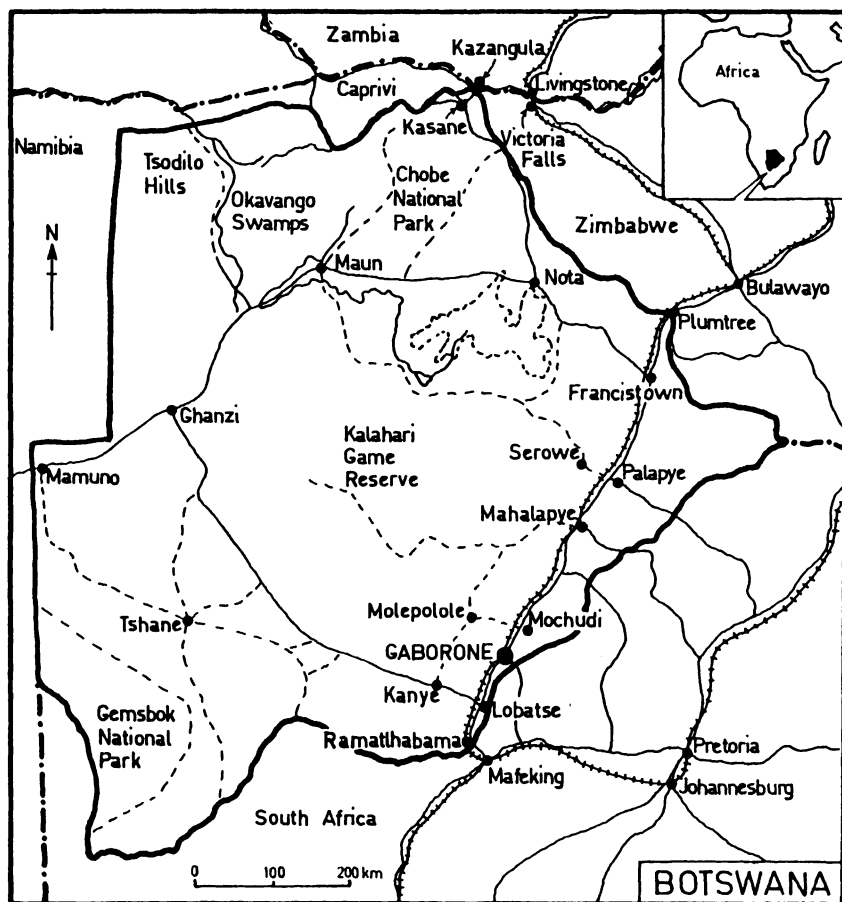
Year of Independence: 1966

UNDP Human Development Index (1994): 0.673

Although Botswana has a small population, it has a huge area. The population is spread unevenly, with concentrations in the east and especially south east. Botswana's overall population density is just two persons per square kilometre.

During the colonial era, Botswana was known as Bechuanaland. The territory became a British protectorate in 1885, and was administered as one of the three High Commission Territories in southern Africa. The other two territories were Basutoland, which is now called Lesotho, and Swaziland. Links between the three territories have been sustained in the postcolonial era, and have been evident in examinations as well as in other sectors. Some important links also exist with South Africa and Zimbabwe.

At the time of Independence, Botswana was one of the poorest countries in Africa. However, subsequent decades brought dramatic economic growth. The economy was previously based on the nomadic herding of livestock and the cultivation of subsistence crops, but now a major contribution to Gross National Product is made by extraction of minerals. Most important are diamonds, copper-nickel and coal; but the country also has significant deposits of asbestos and manganese. Between 1960 and 1985, Botswana had the world's highest growth rate in per capita Gross Domestic Product — exceeding even the growth rate in the so-called 'miracle states' of East Asia (World Bank 1993b, p.3). Economic growth



has facilitated expansion of education, which in turn has brought changes in the examination system.

Development and Structure of Education

Western-type education was introduced to the people of Botswana by religious organisations in the early 1800s, but grew slowly. By 1899 the territory still had only seven schools with 300 pupils. In 1910 a school inspector was appointed with responsibility for Bechuanaland, Basutoland and Swaziland, but he was resident in Basutoland and his main work focused on that territory (Parsons 1984, p.34). In 1929, Bechuanaland and Swaziland were given a separate inspector; and in 1935 that person was appointed the first Director of Education for Bechuanaland (Townsend Coles 1985, p.13). By that time the primary schools in Bechuanaland had about 12,000 pupils, but the territory had no secondary schools. Among the few students who did proceed to secondary education, the majority went to South Africa.

Education was still underdeveloped at the time of Independence in 1966. Botswana then had a population of 526,000 and 251 primary schools, but just nine secondary schools of which only two offered a full five-year programme. Being a small state, the scale of government was limited; and responsibility for education was assigned to the Ministry of Labour & Social Service. However, the place of education was given more prominence in 1967 when the body was retitled Ministry of Education, Health & Labour; and three years later a separate ministry was created solely for Education (Swartland 1991, p.27). This reorganisation both reflected and facilitated considerable growth of the education sector. Between 1966 and 1988, the number of primary pupils grew from 71,500 to 261,400, and the number of secondary pupils grew from 1,530 to 40,360. The latter figure is especially dramatic, showing an increase in enrolment by 26.4 times.

At the time of Independence, formal education was divided into three cycles. The primary cycle had seven years (Standards 1 to 7), junior secondary had three years (Forms 1 to 3), and senior secondary had two years (Forms 4 and 5). At the end of each cycle was a national examination which primarily served to select candidates for the next stage.

Since that time, the structure has been altered but then restored. The 1977 National Policy on Education (Botswana 1977) led to change from a 7-3-2 system to a 7-2-3 one. The two-year junior secondary programme started in 1985, and was followed by a three-year senior secondary programme in 1987. However, the 1994 Revised National Policy on Education (Botswana 1994) led to reintroduction of the 7-3-2 structure.

At the tertiary level, the University of Basutoland, Bechuanaland &

Swaziland (later called the University of Botswana, Lesotho & Swaziland) was founded as a joint enterprise for the three countries in 1964. In 1975, the government of Lesotho nationalised its campus, thus leaving only Botswana and Swaziland together. Finally this partnership also ended, leading in 1982 to formation of the separate Universities of Botswana and of Swaziland. Today the University of Botswana has over 2,000 students, though some students still go abroad since the university is unable to offer all specialisms. The duration of most degree courses at the University of Botswana is four years. Other tertiary institutions include the Colleges of Education and the Agricultural College.

Development and Structure of Examinations

Prior to the 1960s, Form 3 students in the three High Commission Territories took the Junior Certificate Examination (JCE) administered by the University of South Africa. Form 5 students sat the secondary school leaving examination administered by the Joint Matriculation Board, which was an examining body composed of representatives from all South African universities (Cieutat & Snyder 1975, p.6).

In 1958, the Directors of Education in the three High Commission territories were informed that the South African JCE would be discontinued. The Directors felt that this required action to form an alternative examination, and initiated moves which led to the formation in 1961 of the Basutoland, Bechuanaland & Swaziland High Commission Territories Examinations Council (Kellaghan et al. 1989, p.16). Subsequently, the Examinations Council came under the umbrella of what was then called the University of Bechuanaland, Basutoland & Swaziland; and in 1966, following the change in the name of the university, the Council was renamed the University of Botswana, Lesotho & Swaziland Schools Examinations Council (UBLS/SEC).

At first, the chief focus of the UBLS/SEC was the Junior Certificate Examination which it administered in each member country. Numbers were still quite small. In 1964, for example, 152 candidates from Botswana sat the JCE; and only 34 took the Cambridge Overseas School Certificate (COSC) examination operated by the University of Cambridge Local Examinations Syndicate (UCLES). The UBLS/SEC was based in Lesotho, and played a larger role in that country than in the other two. Although the Council administered the JCE for all three countries, for Lesotho it also administered the COSC, London General Certificate in Education (GCE) examinations, and teacher certification examinations. In Botswana and Swaziland, examinations other than the JCE were administered by their respective ministries of education.

In 1970, the governments of Botswana, Lesotho and Swaziland, together with the government of Malawi, established a Regional Testing Resource & Training Centre. This was a project funded through external aid and intended to develop capacity for national assessment programmes. It focused particularly on aptitude tests administered for selection at the end of the primary cycle. In Botswana, this test was known as the Primary School Leaving Examination (PSLE). At the end of the project in 1975, the governments of Botswana, Lesotho and Swaziland, through their regional examinations council, presented a proposal to expand external examinations and certification responsibilities of the UBLS/SEC (Cieutat & Snyder 1975). The plan was for the Council to take over all examination programmes in the school system, as well as the development of primary and secondary curriculum in the member states. The plan was partly based on arguments that a regional institution would be able to support the needs of small states more effectively and at lower unit cost than separate development of national capacity.

Like the university itself, however, the regional examinations body did not survive the political forces of separatism and the demand for stronger national relevance and control over curriculum. Whatever the technical and professional arguments, political factors caused the governments of the three countries to decide to work independently, albeit with collaboration and sharing of experiences when appropriate. In 1979, Botswana withdrew from the Council. Lesotho and Swaziland remained in partnership with a joint examinations syndicate responsible for standards in the primary and Junior Certificate Examinations in Swaziland, and for the Junior Certificate Examination in Lesotho. However, even in these countries additional bodies were created in order to strengthen local control. The governments established national examinations councils which were affiliated to the syndicate but which were administratively and financially autonomous (Kellaghan et al. 1989, p.17; McCabe & Mac Aogain 1989, p.13).

In the case of Botswana, the case for stronger national control over examinations had been made in 1977 by a National Commission on Education. The report of the Commission (Husén 1977, p.114) pointed out that plans for curriculum development could only be achieved if examinations and assessment were the servants of the curriculum. The report added that this is difficult to achieve if a country does not control the assessment of its own educational system:

What may then happen is that an examination system run by an external agency may not assess performance in terms of curricular objectives set by an internal body. When secondary examinations are

set by two different agencies, as is the case in Botswana, true control of the curriculum is indeed difficult. There is no doubt that part of the explanation for the discontinuity between Junior Certificate and Senior Certificate stems from the fact that Junior Certificate is a regional examination, offered in conjunction with Lesotho and Swaziland, while Senior Certificate is run by the [University of Cambridge] Local Examinations Syndicate.

Presenting the case for stronger national control, the Commission recommended creation of a Botswana National Examinations Council to provide direction on examination policy and independent oversight of the administration of the examination, and to maintain standards of marking. The Commission also recommended liaison with the University of Cambridge to prepare a joint School Certificate examination as the first step towards localisation.

Whilst acknowledging the importance of the long-term goal, in the first instance the government decided not to create the Botswana National Examinations Council or to localise the Cambridge Examination. However, the government did accept the Commission's recommendation to withdraw from the UBLS/SEC, and to create an examinations unit within the Ministry of Education.

In 1993, the government received the report of a second National Commission on Education (Kedikilwe 1993). This report reviewed the situation and again stressed the desirability of creating an autonomous National Examinations Council and of moving towards localisation of the Cambridge Overseas School Certificate Examination. The government decided against immediate creation of an autonomous council, but did agree to reshape and upgrade the examinations unit within the Ministry. The government also agreed to a localisation plan through which the first locally-designed COSC paper would be administered in 1998.

The Examinations Research & Testing Division

In 1992, the Directorate of Public Service Management published the report of an Organisation and Methods (O&M) review. The purpose of the O&M review was to improve the performance and effectiveness of the various government ministries. The report identified a need for "an appropriate location for the examination functions". It suggested that since examinations indirectly evaluate performance of the ministry and the schools as well as that of the pupils, the administration of examinations should be free from control or undue influence by other sectors in the Ministry of Education. The report also argued that a degree of autonomy was necessitated by the

need for security in the administration of examinations.

On this basis, and in conjunction with the recommendations of the 1993 National Commission on Education, the government decided to create an Examinations Research & Testing Division (ERTD) within the Ministry of Education. The division was placed in the Ministry headquarters, reporting directly to the Permanent Secretary. With the formation of the division, responsibility for national examinations was removed from the Department of Curriculum Development & Evaluation. The ERTD was perceived to provide the foundation for the eventual establishment of a national examining body. The structure also permitted recruitment of a larger number of specialist personnel. Recruitment was justified by an expected increase in the number of subjects to be examined at primary and junior secondary levels, as well as by planned localisation of the COSC examination.

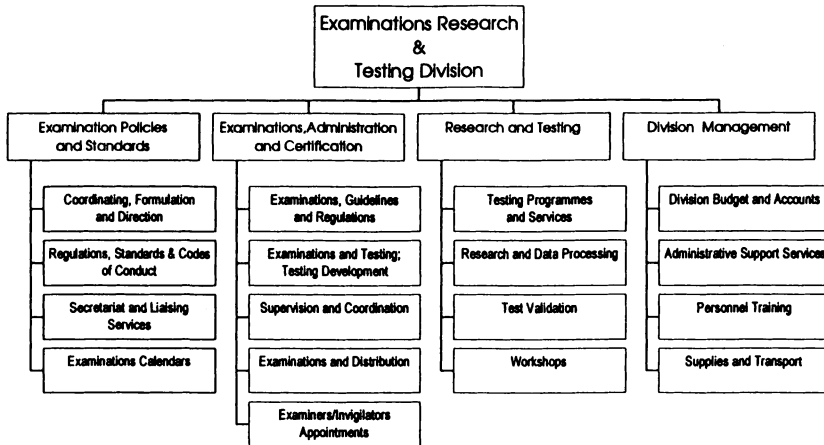
The ERTD came into operation in 1994. Its principal mandate is to prescribe procedures and methods for formative evaluation of students at the various school levels. The division also provides selection tests for clients such as the teacher training colleges and national health institutes.

The structure of the division is shown in Figure 2.1. It has three main professional sections, and one section for management. The roles of these sections are as follows:

- The *Examination Policies & Standards* section is responsible for policy development and implementation. The section also liaises with other parts of the Ministry of Education, with institutions, and with other educational authorities.
- The *Examinations, Administration & Certification* section provides the administrative machinery for the Primary School Leaving Examination (PSLE) and the Junior Certificate Examination, and in due course will cover the school certificate examination. It establishes guidelines for examination subject committees and examiners, ensures that requirements on appointment of markers and examiners are met, and supervises the marking of scripts. The section also publishes results and issues certificates.
- The *Research & Testing* section is responsible for all test development. Officers in this section provide technical input in the design of tests, maintain test standards, and provide technical support to examination committees, subject panels and in-service workshops on all matters related to assessment.
- The *Division Management* section provides administrative support. This includes transport, packaging, despatch and receipt of materials,

and general administrative services such as secretarial support and finance administration.

Figure 2.1: Structure of the Examinations Research & Testing Division, Botswana, 1996



Among the advantages of this structure is that integration of the formerly-separate Research & Testing Centre and the Examinations Unit has assisted coordination and removed artificial barriers. Also, the fact that the ERTD reports directly to the Permanent Secretary minimises the number of approval points, and increases access to top decision-makers. This access offers opportunities for direct representation of policy and resource needs. Further, the structure permits both expanded staffing and greater specialisation of functions.

The Format and Scale of the Public Examinations

The Primary School Leaving Examination tests candidates in five subjects, namely Setswana, English, Mathematics, Social Studies and Science. All subjects have multiple-choice papers, and in addition Setswana and English have essay papers. In 1995, 37,900 candidates sat the PSLE. Most of the Chief Examiners are Curriculum Development Officers in the relevant subjects. It has been considered undesirable for these people actually to set the examinations, so most papers are set by primary teacher-training lecturers or by Education Officers with primary teaching experience. Multiple-choice questions are trialled in a sample of schools selected across the different geographical and cultural regions and embracing different performance levels. Essay questions are not pilot-tested as a standard

practice, but only when there are unusual stimulus materials.

The subjects tested in the Junior Certificate Examination are shown in Table 2.1. The most popular subjects are Setswana, English, Mathematics, Intermediate Science, Social Studies, and Agriculture. In 1995, 35,400 candidates sat the JCE examination. JCE papers are set by committees rather than by individual examiners. The processes of trialling are similar to those for the PSLE. All JCE and PSLE examination papers are printed by a local government printer, but the machine-readable forms are printed outside the country. At the JCE level, one problem arising from the small size of the country has been the limited pool of appropriate people who could be appointed Chief Examiners. As a result, over time a small group of specialists has tended to develop a monopoly of control, and it has sometime become difficult to introduce new blood.

Table 2.1: JCE Subjects and Numbers of Candidates, Botswana, 1994

Subject	No. of Papers	School Candidates	Private Candidates	All Candidates
Setswana	3	31,468	4,917	36,385
English	2	31,687	5,068	36,755
Mathematics	3	31,687	5,002	36,689
Intermediate Science	2	31,687	600	32,287
Social Studies	3	31,687	4,890	36,577
Agriculture	3	31,684	1	31,685
Religious Education	2	10,473	3,727	14,200
Home Economics	3	8,364	4	8,368
Design & Technology	3	8,999	0	8,999
Art	3	5,158	0	5,158
Banking & Commerce	2	1,092	0	1,092
Design & Technology	1	11	0	11
Human and Social Biology	2	0	4,284	4,284
Private Agriculture	2	1	4,838	4,838

For the COSC, there were 7,800 candidates in 1995. Table 2.2 shows the numbers of scripts in each subject in 1994 and 1995. It also shows the proportions of scripts which were marked in Botswana. This is an important aspect of the localisation of the COSC, which is explained below.

Table 2.2: COSC Subjects, Scripts and Markers, Botswana, 1994 and 1995

	1994			1995		
	No. of Scripts	No. of Local Markers	% of Scripts Marked Locally	No. of Scripts	No. of Local Markers	% of Scripts Marked Locally
English Language 1	6,500	15	57	10,457	17	100
English Language 2	9,900	24	100	10,457	20	100
Literature in English	1,300	7	100	910	7	100
CRE	2,000	10	100	2,432	9	100
African History	2,450	20	89	2,698	20	100
World History	1,750	20	63	2,698	20	100
Geography 2	3,000	13	85	4,253	25	100
Dev. Studies 1 & 2	1,550	16	100	1,735	10	100
Dev. Studs Practicals	-	-	-	1,735	3	100
Mathematics 1	9,300	12	100	10,341	20	100
Mathematics 2	7,100	15	77	10,341	15	100
Agriculture	3,700	14	100	4,041	11	100
Biology Theory	3,000	16	100	3,185	20	100
Biology Practical	1,000	4	100	3,180	5	100
Human & Soc. Biology	800	4	100	1,321	4	100
Combined Science	3,900	12	100	4,379	10	100
Food & Nutrition	-	-	-	1,029	10	100
Fashion & Fabrics	-	-	-	685	4	100
Home Management	-	-	-	165	1	100
Art	-	-	-	831	12	100
Design & Technology	-	-	-	875	8	100

Staffing

The Examinations Research & Testing Division has an establishment of 23 professional and 38 administrative staff, but many of these posts are vacant. Table 2.3 shows the situation in 1995, when as many as 10 of the 23 professional posts were vacant. However, over half the vacant posts were new ones, and officers on study leave were expected to return to fill three of them. On the administrative side, only two posts were vacant.

Concerning staff qualifications, the general growth in human capital in Botswana is reflected in the fact that five of the 13 professional staff held Master's degrees. However, another five held only Bachelor's degrees, and three held only diplomas. The government's Department of Public Service Management has so far been unable to meet the training needs identified in the Division's five-year plan.

Table 2.3: Professional Posts in the Examinations Research & Testing Division, Botswana, 1995

	<u>Filled</u>	<u>Vacant</u>	<u>Total</u>
<i>Professional</i>			
Principal Education Officer I (Head of Division)	0	1	1
Principal Education Officer II (Principal Research Testing Officer)	1	0	1
Senior Research Testing Officer	2	6	8
Research Testing Officer	3	1	4
Assistant Research Testing Officer	2	0	2
Registrar	1	0	1
Deputy Registrar	1	0	1
Assistant Registrar	3	1	4
Principal Examinations Officer	1	0	1
Senior Examinations Officer	0	1	1
Examinations Officer	0	1	1
TOTAL	14	11	25
<i>Administrative</i>			
Senior Administration Officer	1	0	1
Administration Officer	1	0	1
Assistant Administration Officer	4	0	4
Senior Administration Assistant	10	0	10
Administration Assistant	9	1	10
Secretarial Staff	5	1	6
Personal Secretary	1	0	1
Machine Operators	5	0	5
TOTAL	36	2	38

A further problem concerns recruitment. As noted by Swartland (1991, p.30), individuals in a small ministry may feel frustrated by the lack of opportunities, especially in a specialist area such as examinations. Because of this, combined with the fact that salaries are lower than many alternative posts, the Division encounters difficulty in attracting well-qualified applicants. The expanded establishment of the ERTD does provide greater scope for advancement and for sharing of workloads, but, paradoxically, it exposes the difficulty of attracting suitable applicants in sufficient numbers.

Because of this shortage, officers must be multi-faceted. The enterprise cannot reach the scale found in large countries, and demands are exacerbated

by staff shortages. Thus the test-development unit, for example, has only seven officers to take care of all examination programmes, selection tests for tertiary institutions, and in-service training on such topics as school-based assessment for teachers and education officers. The result can be detrimental to productivity, leading to stress and over-work.

Localisation of the COSC

Thoughts about localising the COSC can be traced as far back as 1966. In that year, the first proposals were set forth for the eventual transfer of curriculum development and examination administration from Cambridge to local authorities (Cieutat & Snyder 1975, p.7). In 1973, John Deakin, former Registrar of the West African Examinations Council, prepared a report on "The Feasibility of Establishing a Regional School Certificate to Replace the Cambridge Overseas School Certificate Examination". The report recommended that localisation should begin in 1978 and be completed by 1982. However, the recommendation was never implemented because of the demise of the UBLS/SEC.

In 1982, the idea of localising the COSC through a regional examining agency was revived. The combined pressure for localisation came from ministries of education, the teaching profession and the community. It was argued that:

- examination and assessment procedures should reflect and respond to the particular needs of BLS countries;
- the quality of teaching would improve;
- continuity between 'O' level and the local JCE and PSLE examinations would be established;
- results could be published earlier;
- the cost of running the examination would drop;
- the BLS countries had sufficient manpower for localisation; and
- the UK was changing to the General Certificate of Secondary Education (GCSE), thus showing the need for some reform anyway.

However, the idea of localising the COSC through a regional initiative did not advance further. By 1988, both Lesotho and Swaziland had their own Examination Councils which preferred to operate independently. The government of Botswana did not at that point set up its own Examinations Council because the priority was to expand junior secondary education as part of the goal of universal access to basic education.

Botswana's intention to localise the COSC was, however, expressed in the 1985-91 National Development Plan (Botswana 1984). The government

realised that junior secondary expansion would change the nature of senior secondary intakes. The COSC curriculum and examination could have been considered suitable for the small proportion of high-performing students in the days of fierce selection, but was less suitable for the larger intakes now expected in senior secondary schools. In 1993, the government and UCLES entered a formal agreement to localise the COSC over a five-year period. This policy was endorsed by the 1994 Revised National Policy on Education (Botswana 1994).

The localisation programme between 1993 and 1995 may be described as the initial phase. It emphasised localisation of the marking of scripts and the preparatory processes which go along with it, such as administration of marking venues, payment of markers, preparation of standardisation packs, orderly and safe transfer of scripts to marking venues, and preparation of stationery and materials required in each subject. The next phase puts more emphasis on the development of an examination system *per se*. It will cover all the operational areas of a national examination programme, including setting of examination papers, data capture, processing and reporting, validation mechanisms, and the institutional framework within which the various operations and procedures are established. A phased-in approach will be used in the localisation of these operational areas. The focus will be on strengthened capacity in marking scripts, development of papers with checking and moderation by Cambridge, and establishment of examination procedures. Fifteen subjects were selected for localisation of paper-setting by 1998.

The next phase will begin with syllabus development. The plan indicated that syllabus development for the senior school would begin after completion of the 10-year Basic Education curriculum in 1997.

The main constraints in localisation concern availability of specialist expertise. Although the ERTD was allocated a substantial number of posts, the fact that many of them were difficult to fill was symptomatic of the problem. In addition, many of the markers are non-nationals who are employed on contract and who are likely in due course to leave the country. A further important aspect concerns security. Present provision is far below acceptable standards. This is a major issue, because the credibility of standards and procedures is at stake.

Conclusions

In spite of the controversy over the merits and limitations of examinations, they have consistently constituted a powerful component of educational programmes in Botswana as much as elsewhere. Over the years, the people of Botswana have debated the extent to which the education system does

prepare the nation's children to function as useful and productive members of society. In the debate, the match between the examination and the curriculum has been queried. Doubt has been cast on the extent to which the senior secondary curriculum and examinations provide a relevant basis for the overall national human resource development strategy which has been derived from national development needs. Nevertheless, the education system has been perceived as an important capacity-building activity for economic development.

The story of examinations in Botswana is an interesting combination of reliance on external bodies, cooperation in a regional body, and national self-determination. In recent times, the main external body has been UCLES, though various South African boards have also been important. The UBLS/SEC met some of its goals, but, more for political than for professional reasons, failed to provide a long-term answer to the country's needs. Subsequent regional initiatives have also failed to bear much fruit, and to some extent Botswana has attracted criticism from Lesotho and Swaziland for being unwilling to put its full weight into these initiatives (Ralise 1992, p.3). In this context, the main efforts in recent years have focused on development of national capacity. This has been easier to justify and to achieve as the system has grown, and plans now exist for full localisation up to school certificate level.

The government's long-term objective for senior secondary education as expressed in the 1985-91 National Development Plan was to meet the country's manpower needs with a particular emphasis on mathematics and science at the Form 5 level. This change in the curriculum or examination system was seen as a long term objective. Government was to proceed with caution and pragmatism towards the desired target of gaining flexibility in curriculum development at this level. No provision was therefore made to localise the COSC during this plan period. A commitment to the localisation of the senior school curriculum and examination appears in the 1992-96 National Development Plan, where a specific plan for localisation is laid out.