

THE STRUCTURE AND FUNCTION OF CURRICULUM DEVELOPMENT UNITS: AN OECS CASE STUDY

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Using questionnaires and interviews, the study sought factual information and views about the functioning of curriculum development units in five Eastern Caribbean territories, targeting persons involved in curriculum development and educational management as well as some stakeholders. Few structures constituting well developed CDUs were found and organization was generally loose with inadequate specialist staff and physical facilities. All concentrated heavily on primary education. Those CDUs eliciting highest ratings for effectiveness were not necessarily the best organized, or the most adequately supplied with human or physical resources. Effectiveness seemed to depend heavily on a cadre of highly committed individuals functioning in multiple capacities and, thus, appeared to have carried a high cost in terms of individual work loads.

INTRODUCTION AND BACKGROUND

The study was undertaken to examine the structure and function of Curriculum Development Units (CDUs) in five Eastern Caribbean countries. Prior to the 1970s, curriculum development as an area of specialization in the Eastern Caribbean tended to be associated with ministries of education and to target primary schools for the most part. At other levels of education, curricula tended to be adopted rather than developed, and primarily from the United Kingdom (UK). The term 'Curriculum Development Unit' was itself undoubtedly inherited from the UK, where it enjoyed wider currency than in the United States of America. Kerr (1970) traces the idea of establishing groups of persons chosen specifically for curriculum renewal and development back to the early 1960s, and identifies the driving force behind this development: 'The need for groups of personnel capable of engaging in vigorous

processes of curriculum renewal and advancement created the demand for institutional support for this kind of activity' (p. 65).

Similarly, Alles (1970) sees the emergence of a Curriculum Development Centre in Ceylon (now Sri Lanka) as driven by a need for institutional support for innovative teachers who were dissatisfied with working in isolation. In the UK, these influences led, for example, to the setting up of the Schools Council in 1964 and the Centre for Curriculum Renewal and Educational Development Overseas (CREDO) in 1966. The latter was a product of collaboration between the Nuffield Foundation and the British Ministry of Overseas Development.

One of the first acts of CREDO was to arrange, with the Education Development Centre (EDC), a conference of African educators at Oxford in September 1967. Perhaps its main recommendation was 'that curriculum development units should be set up in each country.' This recommendation was strongly reaffirmed at the Fourth Commonwealth Education Conference held in Lagos in 1968. Apart from providing the 'engine' for curriculum development, such units were considered to be useful in facilitating research and reducing the duplication and wastage which resulted when several donor agencies funneled aid to developing countries. Kerr appraised the units in Ghana, Uganda and Guyana as being effective in these respects.

Kerr cites the following important functions for National Curriculum Centres:

- to ensure that curriculum reorganization is systematically carried out;
- to bring together available resources for the construction of curriculum materials appropriate to the rapidly changing environment;
- to help retrain teachers for the new tasks;
- to disseminate the new ideas and approaches into the schools ... (p. 74)
- to ensure that universities and ministries of education cooperate effectively (p. 76).

He argues that the work of a CDU should be guided by the two principles of teacher involvement and integration of available resources (p. 74), and saw the quality of leadership provided as critical to its functioning. He cautions, however, that its efforts could be nullified by opposing values within the society (p. 75).

In the case of Ceylon, Alles (1970) notes that CDU activity was initially strongly associated with an in-service education programme. This was based upon the use of a cohort of "teacher-leaders" who acted as intermediaries between a writing team and the bulk of teachers in the field (pp. 83-84). Indeed, Alles considers that the perceived need for a centre in Ceylon had more to do with the establishment of teams of workers with the necessary skills for implementing effective educational action than with the building up of institutions for curriculum development. Ultimately, however, the Ministry of Education accepted the need to institutionalize programmes of curriculum development in a 'Curriculum Centre.'

In Africa, Hawes (1979) reports some successful CDCs in Ghana, Zambia, Uganda and Kenya. These Centres 'were set up with a degree of autonomy, yet firmly established under Ministry control' (p. 45). However, other arrangements also existed:

It is interesting to find ... that in certain systems there has evolved a tighter and more centralized system of control with curriculum units established and housed within ministries of education. Thus certain states of Nigeria ... have curriculum units within Ministry Planning Divisions ... (p. 47)

He suggests that where CDCs enjoy autonomy, with some degree of isolation from the main machinery of educational planning, smaller, more manageable, and more accessible curriculum units are realized.

Curriculum decision-making structures in the USA are different from those outlined above. The bulk of such activities are controlled by state, country and district mechanisms. Many of the curriculum writers in that country will contend that textbook publishers seem to dictate what happens in classrooms. However, Tanner and Tanner (1995) refute this, and point to instances where state and local education agencies have

refused to recommend adoption of textbooks because of what they contain or what they omit. There is little doubt that in the case of decision-making and development of curriculum, the state legislatures have almost absolute power concerning what transpires in their educational systems. Some states have put in place more rigid laws than others, but all have mechanisms in place for ensuring a high level of accountability from teachers and schools.

Some curriculum development activity has been handled by specialized agencies, like the Biological Sciences Curriculum Study (BSCS) group, and a range of Education Centres and Faculties of Education. Funding usually comes from agencies like the National Science Foundation. Adoption of these materials by states and local districts is usually controlled by educators, administrators and teachers designated for that task.

Perhaps the difference between the USA and the other countries reviewed here is related to its rather decentralized system in curriculum and assessment matters. Whereas there are national examinations in other countries, no such bodies exist in the USA. Indeed, until recently it had no national education standards. The emergence of such standards may well influence the approach to curriculum development.

As far as the Caribbean is concerned, the literature on curriculum development units, their establishment, functions and structures is quite sparse. This paper represents one of the few attempts to look at these structures in a systematic way.

In St. Vincent and the Grenadines, the Unesco Education Sector Survey (1982) deplors the adverse effects on the quality of education in that country resulting from the absence of permanent technical services responsible for curriculum work. The report also diagnoses that the absence of services 'for the development of criteria and procedures for evaluation, and for the translation of educational decisions into programmes with quantitative targets and time limits' (p. 15).

The report notes that all these activities are presently carried out in St. Vincent:

A common characteristic in all cases, is that they are performed by staff who are neither exclusively nor mainly assigned to such activities, who do not have sufficient command of the necessary techniques, and who are exclusively relying on support from technical assistance since the activities are conceived and implemented under external financing assistance (p. 15).

A Curriculum Development Officer was appointed in 1986 as a first step towards creating a Curriculum Development Unit.

The Commonwealth of Dominica, in its Education Sector Plan 1989-1994, (199?) makes a strong case for a curriculum development and evaluation unit thus:

The establishment of a Curriculum Development Unit is proposed as a means of achieving the goals of curriculum development... The Unit will be responsible for the preparation, distribution and assessment of curriculum material and the assessment of students in the school system (p. 37).

The Education Sector Plan outlines the composition of the Unit staff--a Coordinator, a Research and Dissemination Officer, an Assessment Officer. It also outlines the composition of the to-be-established Curriculum Committee to be chaired by the Chief Education Officer, and to include principals and teachers from primary and secondary schools.

The Trinidad and Tobago Education Policy Paper 1993-2003 (1994) does not state explicitly the need for curriculum development units. It does, however, strongly recommend that there is a need to establish a system of curriculum engineering: 'A National Council on Curriculum (NCC) should form the kernel of the system of engineering and, working with educators and administrators in the field, it should develop an overarching design to guide curriculum development' (p. 39).

The Caribbean countries have for many years been involved in appraisal and improvement of the curriculum in schools. As governments have become more aware of the need to synchronize what happens in schools with the life of the society in which school-leavers must function, increased emphasis has been placed on the curriculum as an instrument for achieving this goal.

Curriculum development and renewal have benefitted tremendously from external funding agencies and the return of Caribbean people with knowledge and skills, mostly acquired in developed countries. Developed countries, by their preoccupation with curriculum development activities following the launching of the Soviet Sputnik in the late 1950s, set up a chain reaction which has extended to the countries of the developing world.

The first generation of curriculum projects were run mainly by foreign experts and the few local persons with expertise. However, they generated in each country a cadre of educators and teachers with sufficient knowledge and skills to provide curriculum development and renewal services on an on-going basis. At first, curriculum activities were ad hoc in nature, no doubt constrained by insufficient resources, both financial and manpower. Gradually, however, countries have moved to provide training for larger numbers of qualified persons, and equally importantly to establish the infrastructure and mechanisms that would institutionalize the various aspects of curriculum innovation.

Some countries like Barbados, Trinidad and Tobago, and Jamaica have set up Committees to oversee and guide the curriculum development activities, as well as Units in Ministries of Education for the day-to-day monitoring, assessing and modification of what is offered in schools. In the last two decades, many of the Eastern Caribbean countries made similar investments in the provision of infrastructure and personnel. St. Lucia, with external assistance, established the Curriculum and Materials Development Unit which still continues to provide services in curriculum shaping and re-shaping in the light of changing needs and aspirations. The establishment of such Units in the five countries which form the subject of this research has come more recently.

It is clear from this brief review that no single structure or name characterizes the various bodies engaged in curriculum development activities. Depending on national priorities, bodies might be organized to focus on certain critical functions. Hawes (1979) suggests that no one centre or unit can adequately accomplish all the variety of roles. However, he concludes that, regardless of role priorities, all structures should be:

- closely related to decision-making and planning including financial appropriation;
- sufficiently autonomous to exercise a degree of flexibility;
- linked to sources of information concerning the system to be changed;
- closely linked with machinery for dissemination of information about change and their implementation in schools;
- involved in evaluation both of product and process (p. 50).

OBJECTIVES OF THE STUDY

The study is an appraisal of CDUs in five Eastern Caribbean countries. The main objectives were to:

1. undertake a diagnosis of the Curriculum Development Units (CDUs) in five Eastern Caribbean countries;
2. make recommendations on ways in which these Units may be strengthened, and work cooperatively.

DEFINITION

It was clear from the outset that while the term "Curriculum Development Unit" might be a convenient label for purposes of reporting, the extent to which actual units could be said to exist varied tremendously. A full-fledged CDU would be expected to show at least:

- a staff (not necessarily all full-time), at least one of whom would have curriculum development as the sole or major activity;
- an organizational structure in which staff would report to the head of the Unit;

- physical space (not necessarily a complete building) allocated to it;
- a set of resources for carrying out its functions.

Only one of the countries studied possessed a unit meeting all of these criteria. The lowest common denominator across the countries appeared to be that one or more persons have been identified or recognized by government as having responsibility for at least the coordination of curriculum development in schools and colleges. For purposes of this study, the term CDU is being used to cover all arrangements meeting this minimal condition.

TARGET POPULATION

To develop a picture of CDU activity in each country some sampling was necessary, since there were several persons and institutions which could be presumed to be knowledgeable on the issue. The target population was the curriculum policy-makers, planners and implementers in each of the five territories. These were seen as being located in the following institutions:

- Ministries of Education - Ministers, Permanent Secretaries, Education Officers
- Curriculum Development Units where these existed
- Teachers' Colleges - Principals and staff
- Primary and Secondary Schools - Principals and staff
- Other Educational Institutions likely to be involved in or directly affected by the work of curriculum development units.

METHODOLOGY

Sampling was purposive rather than random--the aim being to select a cross-section of persons likely to be in a position to make valid comments on curriculum development activities in each territory. Data were collected by questionnaires and interviews. Pivotal persons were selected in each territory (often the Curriculum Development Officers themselves) and, with their assistance, 150 questionnaires were distributed (30 in each

territory). A sub-sample of 5-10 persons in each territory was identified for interviewing.

Information solicited included factual information as well as opinions. Factual information was requested on staffing, mode of operation, and scope of activities of the CDU. Only the few persons in a position to answer these questions were expected to do so. All respondents were expected to give opinions on objectives, terms of reference, and effectiveness of the existing CDU arrangements.

DATA ANALYSIS

This will be considered in two stages

- (i) responses to precoded questionnaire items, and
- (ii) responses to open-ended questions from interviews and questionnaire.

DATA ANALYSIS I - PRECODED QUESTIONNAIRE DATA

A total of 93 responses were received from the 150 questionnaires circulated. The distribution of these responses across country, institution, and level in the institutional hierarchy are shown in Tables 1 to 3. It will be observed that numbers responding were similar across three territories, being slightly higher than average in Country B, and somewhat low in Country C (Table 1). There was no indication of the institutions represented or posts held for almost half of the sample (Tables 2 & 3). No generalization from these tables is therefore possible, nor can these variables be used for making comparisons. However, it was clear from discussions with persons responsible for questionnaire administration in each territory that the distribution was to the institutions shown in Table 2, and that the bulk of the responses were from Ministry and Teachers' College personnel. Overall, institutions' upper and lower levels of administration were about equally represented, there being a small proportion of students—mainly from Teachers' Colleges (Table 3.).

Table 1

Frequency Distribution of Responses by Country

COUNTRY	FREQUENCY	PERCENT
A	18	19.4
B	23	24.7
C	13	14.0
D	20	21.5
E	19	20.4
TOTAL	93	100.0

Table 2

Frequency Distribution of Responses by Institution

INSTITUTION	VALUE	FREQUENCY	PERCENT
Primary	1	7	7.5
Secondary	2	8	8.6
Teachers' College	3	15	16.1
Ministry	4	15	16.1
Other	5	7	7.5
No Response	0	41	44.1
TOTAL		93	100.00

Table 3

Frequency Distribution of Responses by Position

POSITION	VALUE	FREQUENCY	PERCENT
Overall Head	1	13	14.0
Dept. Head	2	5	5.4
Staff	3	19	20.4
Student	4	6	6.5
No Response	0	50	53.8
TOTAL		93	100.0

STATUS OF CDUs

This issue will be more fully considered for individual territories in the second stage of the analysis. However, a brief summary is necessary here to provide a background for this part of the analysis.

Country C was the only territory in which the use of the term 'unit' went unchallenged, and even here considerable deficiencies in personnel and resources were noted. It should be clearly understood that many respondents did not consider that the arrangements existing in their territories merited the term. Physical structures specifically designated for CDU activity did not appear to exist in Country D or Country E at the time of data collection. Space allocated in Country B and Country C was considered highly inadequate and all, including the Curriculum Resource Centre in Country A, indicated serious limitations in personnel and/or resources.

The only common feature across the territories appeared to be the existence of at least one person—a curriculum development officer, generally at the level of Education Officer—recognized by government as responsible to some degree for curriculum development. These were

expected to work with other persons as and when their skills were needed. However, these additional persons were not necessarily responsible to the curriculum development officers. The latter, consequently, were inclined to take the view that questions about precise numbers of staff and period of operation could not properly be answered until CDUs, with clearly defined structures, were constituted. While other respondents sometimes provided answers to these questions, the fact that varying answers were provided only served to underscore impressions of fluidity in the arrangements.

STRUCTURES OVERSEEING CURRICULUM DEVELOPMENT

The terms of reference of one National Curriculum Development Committee were presented and opinions solicited about their desirability in the territories under study. (The question of the desirability of the structures themselves is taken up in stage 2 of the analysis). A rating scale of 5 (strongly agree); 1 (strongly disagree) was used. As shown in Table 4, the responses were quite strongly positive and a breakdown by country was considered unnecessary. The responses are given in descending order of strength of agreement.

Table 4

**Strength of Agreement with Various Terms
of Reference, in Descending Order of Means**

VARIABLE	MEAN	STD. DEV.	N	LABEL
V19	4.52	.93	88	Prepare curriculum for special needs
0	4.45	.79	88	Guide subject committees
V16	4.44	.80	88	Review exams
V13	4.40	.85	88	Review time allocated
V18	4.31	.78	89	Co-opt skills needed
V15	4.23	.91	87	Review syllabuses
V17	3.91	1.00	88	Advise minister

Liaising with other educational departments was suggested as an addition to the terms of reference.

CDU OBJECTIVES

Similarly high levels of agreement were shown with the CDU objectives spanning a range of curriculum development functions (Table 5: scale-5 (very important); 1 (not important)).

Table 5

Strength of Agreement with Various CDU Objectives, in Descending Order of Means

VARIABLE	MEAN	STD. DEV.	N	LABEL
V04	4.65	.72	86	Co-ordinate efforts
V05	4.55	.79	86	Innovation
V03	4.46	.91	82	Design curricula
V09	4.38	.98	86	Conduct research
V10	4.38	.96	83	Resource help
V06	4.33	.91	84	Dissemination
V07	4.33	.98	86	Locate materials
V11	4.23	.95	81	Assist policy
V08	3.98	1.02	81	Develop media

Other objectives considered important included: working to improve students' performance, and assisting schools with the development of evaluation procedures.

The objectives actually listed for the CDUs under study (Country A, Country B, Country C), showed rather more concern with assisting and monitoring existing programmes than with innovation of new programmes. The focus appeared to be heavily on production of materials to support existing programmes, and the identification and solution of teaching/learning and resource problems. Some functions listed under the terms of reference of national committees also appeared as CDU objectives, including review of curricula, textbooks, and examinations.

In contrast to the generally high levels of importance attached to the CDU objectives, the levels of actual emphasis on similar objectives was perceived to be relatively low (Table 6). The highest mean value in Table 6 (3.29) is actually below the lowest in Table 5 (3.98). In fact, for comparable objectives, the difference between importance and actual emphasis as perceived by the respondents were all highly significant (Table 7).

Table 6
Perceived Emphasis on Various CDU
Objectives, Descending Order of Means

VARIABLE	MEAN	STD. DEV.	N	LABEL
V39	3.29	1.04	49	Implementation
V37	3.23	1.24	48	Design
V38	3.22	.98	49	Diffusion
V43	3.13	1.29	45	Teacher orientation
V42	2.91	1.06	45	Resource development
V36	2.73	1.12	48	Innovation
V41	2.56	1.29	48	Summative
V34	2.55	1.29	38	Policy formulation
V35	2.49	1.12	45	Research
V40	2.47	1.20	47	Formative evaluation

Table 7

Differences Between Perceived Importance and Actual Emphasis for Various CDU Objectives (two-tailed probability)

OBJECTIVES	IMPORTANCE		EMPHASIS		t-value	p <
	Var	Mean	Var	Mean		
Policy formulation	V11	4.14	V34	2.54	5.62	.001
Research	V09	4.47	V35	2.49	9.45	.001
Innovation	V05	4.48	V36	2.78	8.43	.001
Curriculum design	V02	4.36	V37	3.27	4.71	.001
Diffusion & dissemination	V06	4.40	V38	3.21	6.56	.001
Resource development	V10	4.44	V42	2.91	7.67	.001

On the question of effectiveness in achieving objectives, the responses again showed a tendency to low ratings (Table 8). Average ratings were highest in activities related to the preparation and use of curriculum materials and lowest in matters relating to research evaluation and policy.

Table 8

Overall Perceived Effectiveness of Territories in Achieving Various CDU Objectives, in Descending Order of Means

VARIABLE	MEAN	STD. DEV.	N	LABEL
V79	3.28	1.14	43	Diffusion
V77	3.12	1.31	43	Curriculum design
V78	3.05	1.29	42	Implementation
V82	3.05	1.30	40	Teacher reorientation
V81	2.78	1.14	40	Resource development
V76	2.73	1.35	44	Innovation
V74	2.67	1.45	36	Influencing policy
V72	2.62	1.32	37	Policy formulation
V73	2.58	1.38	36	Articulating policy
V80	2.52	1.25	44	Evaluation
V75	2.45	1.29	42	Research

EDUCATION LEVELS TARGETED

A global picture of the relative emphasis of CDUs on various levels in the education system as perceived by the respondents is given in Table 9. The wide variation in number of respondents is due to the fact that only those in a position to comment were asked to respond to these items. The order of emphasis is clearly Primary, Secondary, Tertiary/Pre-school. The emphasis throughout primary school is strong, but there is an appreciable reduction in emphasis for Junior Secondary school, and a further reduction for tertiary and other stages. The low emphasis at the Senior Secondary stage may be related to the influence of public examinations but other factors, such as the qualifications and experience of teachers at the stage, may have some effect.

Table 9

Levels in the Education System at Which CDUs were Perceived to Operate - in Descending Order of Percent Frequencies

VARIABLE	FREQUENCY %	N	LABEL
V24	96.4	56	Upper Primary
V23	94.7	57	Lower Primary
V25	79.5	44	Junior Secondary
V26	51.2	41	Senior Secondary
V27	35.0	40	Teachers' College
V28	31.6	38	Technical College
V31	25.0	36	Adult Education
V22	20.6	34	Pre-school
V29	15.2	33	State College
V30	6.9	29	Community College

ANALYSIS OF PRE-CODED RESPONSES BY COUNTRY

There was little variation across territories in the relatively high ratings of agreement with terms of reference and importance of objectives. However, for perceived emphasis on the effectiveness in activities related to these objectives, there were significant differences. There was a fairly consistent pattern across both groups of ratings, the general order of increasing ratings being--Country A, Country B, Country C, Country E, Country D. The results are summarized in Table 10 for items relating to emphasis on curriculum activities. The main departures from the general trend are that Country B, rather than Country A, was lowest in emphasis on Policy formulation, Research, Resource development, and Teacher

reorientation, whereas Country D showed only a mid-range rating of 2.67 in the area of Policy formulation.

For effectiveness of CDU activities (Table 11), the pattern was similar, except that Country E rather than Country D tended to show the highest ratings. In interpreting these data, it should be borne in mind that the ratings are perceptions rather than objective measures, and that the number of valid responses was small in Country A and Country E.

Table 10

**Differences Across Territories in Perceived Emphasis
on Various Curriculum Activities - Analysis of Variance**

VARIABLE	sig		N	RANGE OF MEANS	
	F	P <		LOWEST	HIGHEST
V34 Policy formulation	4.81	.01	38	1.75 (B)	4.20 (E)
V35 Research	13.21	.001	45	1.46 (B)	3.50 (D)
V36 Innovation	9.95	.001	48	2.00 (A)	3.50 (D)
V37 Design	6.78	.001	48	2.00 (A)	4.00 (D)
V38 Diffusion	4.63	.01	49	2.10 (A)	3.70 (D)
V39 Implementation	10.27	.001	49	2.00 (A)	4.00 (E)
V40 Formative evaluation	15.35	.001	47	1.40 (A)	3.50 (D)
V41 Summative evaluation	10.68	.001	48	1.50 (A)	3.80 (D)
V42 Resource development	1.88	ns	45	2.27 (B)	3.60 (D)
V43 Teacher reorientation	3.70	.05	45	2.67 (B)	4.00 (D)

Table 11

Differences Across Territories in Perceived Effectiveness
of Various Curriculum Activities - Analysis of Variance

VARIABLE		sig	N	RANGE OF MEANS	
		p <		LOWEST	HIGHEST
V72 Policy formulation	4.46	.01	37	1.50 (A)	3.50 (E)
V73 Policy articulation	4.92	.01	36	1.50 (A)	3.60 (D)
V74 Policy influencing	4.46	.01	37	1.50 (A)	3.50 (E)
V75 Research	4.93	.01	42	1.00 (A)	3.23 (D)
V76 Innovation	6.39	.001	44	1.00 (A)	3.50 (E)
V77 Design	5.76	.01	43	1.50 (A)	3.80 (E)
V78 Implementation	8.34	.001	42	1.25 (A)	4.00 (E)
V79 Diffusion	3.22	.05	43	2.50 (B)	3.80 (C)
V80 Evaluation	7.35	.001	44	1.25 (A)	3.40 (E)
V81 Resource development	2.11	ns	40	2.00 (A)	3.33 (D)
V82 Teacher reorientation	4.16	.01	40	1.00 (A)	3.75 (E)

DATA ANALYSIS II - OPEN-ENDED QUESTIONS

Interview data, as well as written responses to questions about staffing, resources, and mode of operation are reported in this section. In general, it was assumed that the Chief Education Officer would have reliable information on Ministry matters while the Curriculum Development Officer would be more familiar with the details of the CDU operation.

The sample interviewed included, as far as was possible the following: The Minister of Education, Permanent Secretary, Chief Education Officer,

one Education Officer, one Headteacher (Primary), one Headteacher (Secondary), Principal/Head, Teacher Education Division.

COUNTRY A

MINISTRY OFFICIALS

The Honourable Minister and Chief Education Officer were out of the country at the time of the interview.

It was reported that curriculum development was engineered through meetings/workshops, using specially chosen persons with competence in curriculum matters and knowledge in the subject area concerned. The main thrust was at the primary level, with some limited input at the secondary level.

The Curriculum Development Officer's main functions included curriculum review and facilitating change at all levels, in keeping with perceived needs. One other function not well carried out, was to review textbooks in the system and to advise the policy-makers about suitability.

Equipment at the Curriculum Resource Centre was adequate but not elaborate. However, constraints of finance, resource personnel and adequate space curtailed its effectiveness.

In the absence of a national coordinating committee with clearly defined objectives, the priorities seen by the Curriculum Officer, though inherently sound, did not have the force necessary for their implementation. The officer's dream of the CDU 'bringing the Curriculum Development Officer, Specialist Supervisors and other personnel together in a cooperative body to oversee and coordinate all curriculum activity' will apparently remain unfulfilled for the foreseeable future.

HEADTEACHERS/PRINCIPALS

Because of the lack of knowledge of CDU activity, the responses of the three persons, including the principal of the Teachers' College are taken together. Any differences in perspective are noted.

The feeling was expressed that although the existing centre was a step in the right direction, it did not result from a planned curriculum strategy and was not getting official recognition.

The need for an adequately functioning Unit and Centre was underscored since curriculum activities had already taken place. It was felt that there was a distinct role for school-based curriculum development to handle problems peculiar to a school. However, scarcity of required skills in any one school would limit the scope and quality of such work. The principals felt that present-day curricula were too academic and there was dire need for more emphasis on skills for living, orientation towards requirements of the world of work, and more stress on the oral aspects of Language Arts.

The main constraints identified which militated against achievement of the priorities were finance and training of teachers. Besides these, there was need for fully functioning CDU backed by a clearly articulated policy.

COUNTY B

MINISTRY OFFICIALS

The officials intimated that although an arrangement was in existence, it was not a fully organized CDU, and was currently performing limited work with limited staff. The objectives of the CDU were summarized as:

- identification and analysis of curricular problems;
- relating school curricula to national goals;
- development of curriculum guides in various subject areas at all levels of the system;
- provision of reorientation for teachers;

- monitoring, assessing and evaluating school programmes, teachers and students.

At the time of this study, the CDU, operated out of the Teachers' College complex, was developing materials in mathematics, science and social studies, using teachers on an ad hoc basis to assist with the materials production.

The areas of priority into which the CDU should move were identified as—Adult Education and Technical/Vocational. There were, however, many constraints inhibiting innovation including finance, absence of a CDU structure, lack of human resources and equipment, and lack of space.

The officials saw the need for a national Curriculum Development Committee and made some explicit recommendations for improvements in the workings of the CDU:

- the articulation of clear policy guidelines for curriculum development;
- the establishment of a curriculum coordination committee;
- the identification and appointment of subject officers, a research officer and an assessment officer;
- the provision of enough space to accommodate storage needs as well as a resource centre.

HEADTEACHERS/PRINCIPALS

There was little evidence of CDU activity impacting at the secondary level, although it was felt that there was an important role that it might play in translating syllabus intentions into curriculum guides for teachers. This role was even more important because of the rapid turnover of staff.

The primary principal felt that much of the curriculum development impacting on the school preceded the setting up of the CDU, so that it was a little premature to comment. However, linkages between the school-based curriculum development and the CDU must be forged.

The main constraint was perceived to be lack of coordination between the CDU and the principals of schools of colleges.

COUNTRY C

MINISTRY OFFICIALS

It was reported that the CDU, consisting of a Chief Curriculum Officer and four subject leaders (science, mathematics, social studies, language arts), had been very influential in coordinating and developing curricula for primary schools. It was a relatively well-equipped Unit housed at the Ministry of Education and sharing certain services with the latter.

The ministry officials differed somewhat in what they saw as the additional functions that the CDU should perform. The Honourable Minister suggested a move away from writing materials and curriculum planning to a team approach to teacher training in conjunction with Education Officers and the Teachers' College. He also felt that some impact should be made at the secondary level. The other officials agreed with the point about impacting on the secondary level, but felt that more materials production was necessary as well as more school visits.

All interviewees agreed that the main constraints were personnel and finance, especially the former. The Curriculum Development Subject Officers felt that they needed additional professional training, especially in aspects of workshop management and curriculum skills.

As regards the role of external agencies, all interviewees pinpointed technical assistance, provision of resource materials, facilitating of training attachments for Curriculum Development Officers, and networking to make materials available.

HEADTEACHERS/PRINCIPALS

Here again, the main impact of the CDU was at the primary level in areas such as science, social studies, mathematics, language arts and family life education.

The impact was less felt at the secondary level although the principal interviewed felt that the CDU has a role to play in producing instructional materials for the first three years (11-14 years) of the secondary level.

The Teacher Education Division, through the principal, saw a more dynamic role for the CDU. He suggested that much more needed to be done in facilitating meaningful implementation in the classroom. He deplored the apparent lack of coordination between the CDU and the teacher preparation institution.

COUNTRY D

MINISTRY OFFICIALS

There was no CDU as such. Nevertheless, the whole range of curriculum development activities was taking place. The approach used relied heavily on the Teachers' College. Indeed, less distinction was made between the roles of Ministry-based Education Officers and Teachers' College personnel than was the norm in the other countries studied. The Curriculum Coordinator was a recent appointee, while the Chief Education Officer himself appeared to be involved in a range of curriculum-related activities, including school visiting, chairing committees, and in some cases initiating change.

All interviewees agreed that there should be a move away from an ad hoc approach to curriculum policy formulation, planning and evaluation, opting instead for an identifiable individual with full responsibility for coordination. Among the priorities identified were broadening of activities to include kindergarten, slow learners, language arts, and the establishment of a National Curriculum Committee. As regards the role of external agencies in CDU activities, it was felt that networking and facilitating cooperative activity at the regional level were most important.

HEADTEACHERS/PRINCIPALS

Two benefits that should accrue from linkages between school-based and national curriculum development were cited--benefit of expertise to the school, dissemination of ideas from school to school.

COUNTRY E

MINISTRY OFFICIALS

Curriculum planning activities, it was reported, took place through workshops geared towards providing materials for the primary level. National testing at 7, 9, 11+ was also being coordinated by the CDU. The unit, which really consisted of one or two persons, coordinated materials development, initiated teacher orientation, and monitored curricula in schools. The CDU also helped in the standardization of primary and secondary textbooks.

The Curriculum Development Officer was helped by Subject Organizers (approximately 10), and a Test Development Officer. This loosely arranged mechanism formed the nucleus of curriculum development activities.

The officials felt that pre-primary and adult education, as well as the linking of the senior primary curriculum with that of lower secondary schools, were the main priorities. The Honourable Minister was more specific about the priorities, listing the move away from academics to life skills, and technical/vocational education as the major thrust.

Several constraints appeared to inhibit curriculum innovation activities:

- the existing structure was too loose and needed restructuring and formalization;
- organizers needed training and upgrading;
- the enormous burden on the CDU must be lifted and a broad-based unit established;
- lack of coordination of curriculum activities with the Resource Centre.

The absence of a National Curriculum Coordinating Committee was regretted. However, the involvement of external funding agencies would be welcomed in the form of technical assistance, project articulation and intelligence, and training and upgrading of personnel.

HEADTEACHERS/PRINCIPALS

At the primary level, much more impact of the CDU was felt in the form of provision of scope and sequence charts in language arts, social studies, mathematics, science and health. The mode of operation was to use teachers in the workshop situation to facilitate development, and to a lesser extent, implementation.

All the principals interviewed saw the desirability of school-based curriculum development but suggested that this must be within proper guidelines and coordinated with the CDU. They also agreed that, constraints of finance and adequate personnel having been alleviated, curriculum activities should be in areas of literacy, numeracy and technical/vocational education.

As far as the Teachers' College principal was concerned, the activities of the curriculum development officer had no impact on the College. The only slight contact occurred when the curriculum materials were taken to the Resource Centre, which is housed at the College, for production. Although he was unaware of the functions of the curriculum development officer, he agreed that College-based and School-based curriculum planning were most essential. He echoed the sentiment of the Ministry Officials by suggesting that the establishment of a full-fledged CDU with a well-defined structure, was long overdue. There were, however, other priorities he suggested--reorientation of teachers to facilitate implementation; renewed look at curriculum review to make decision-making more effective; re-definition of the role of Organizers; the use of cooperating teachers to complement the work of the Organizers.

SUMMARY

Of the five OCS territories studied, only Country C could be said to have a Curriculum Development Unit. All, however, had identified at least one person who was expected to serve as Curriculum Development Officer.

In Country A, the officer operated from a resource centre which appeared to be providing useful reprographic services and a limited supply of educational software for the system. This centre, however, showed the lowest ratings for involvement in curriculum development and effectiveness in these countries. The Country B arrangement was in existence for only a year and had already produced some materials under difficult circumstances. The country was the one most clearly involved in developing a formal structure for articulating policy related to the functioning of a Unit. The Country A Unit, by contrast, has been functioning for a number of years and had generated much curriculum material, some perceived to be now in need of revision. This territory recorded the highest ratings for effectiveness in diffusion of materials.

With a loose structure involving Teachers' College Tutors and Ministry-based Officers, Country D had also been active for a number of years with a range of materials to its credit. The territory showed the highest rating for engagement in curriculum development activities, and the highest level of integration of curriculum development activities – a feature which was almost non-existent in other territories. It was not yet clear what level of integration would be achieved in Country B—the fact that the 'unit' was currently based at the Teachers' College may or may not be significant.

The operation in Country E was generally the most highly rated for effectiveness, in spite of loose structure and meagre resources.

The extent to which resources and associated structures existed in the various territories is summarized in Table 12.

Table 12

Presence * of Various Facilities in the Curriculum Development Arrangements in Various Territories

SOURCES/RESOURCES	COUNTRY				
	A	B	C	D	E
Curriculum Development Committee		*			
Curriculum Development Unit			*		
Curriculum Development Officer	*	*	*	*	*
Subject Specialists	*	*	*	*	*
Research/Evaluation Specialists				*	*
Media/Production Specialist					
Physical Location	*	*	*		
Reprographic Facilities	*	*	*	*	*
Adequate Storage					
Resource Centre	*				*

It was, at best, unclear to what extent national curriculum committees could be said to exist. The process of consultation had taken place to some extent in all territories, and National Training Boards were specifically mentioned in some. However, Country B was the only territory where a formally constituted committee intended to advise on overall educational policy was generally agreed to be functioning at the time of the study, and this was not yet considered to be a curriculum committee. It was generally agreed across all territories that there should be such a committee, but that it should function.

It is noteworthy that the Curriculum Development Officer in Country A, despite his title and facilities, did not function effectively as the curriculum coordinator. It is most unlikely that the low ratings for effectiveness obtained here were purely coincidental. While most countries had at least identified subject specialists who worked with the officer, in Country B there was a lack of such persons associated with the 'unit.'

The actual functions of the Curriculum Development Officers varied. In Country E and Country B, the responsibility as well as the bulk of the actual work appeared to fall on one or two officers. The Country D tutors appeared to have too many responsibilities while the Country A officer, though not short of work, appeared to have too little actual responsibility for curriculum development and its coordination. With the possible exception of Country C, the structure within which the officers operated was too loose to permit adequate coordination, and even Country C, with its tighter structure, did not achieve the desired level of coordination with the Teacher Training Division of the Tertiary Level Institution.

The main difference observable in the Table between the territories with highest effectiveness ratings and the others is that the former (Country D and Country E) had access to a research/ evaluation specialist. It is also noteworthy that their effectiveness was achieved in spite of a lack of physical location specifically for CDU activity. One feature not obvious from the Table is the structure within which actual work was done. In the most productive situations, the leader was not always designated a Curriculum Development Officer, but was able to lead. Work could be done by a team of persons, identified as having the necessary knowledge/skills, who reported to the leader. There was human costs in these arrangements as resource persons with other demanding substantive posts were overworked. This is a problem that must be addressed.

RECOMMENDATIONS

Communication

There was considerable lack of information about the existence and functions of CDUs in the wider educational system. Given that some Units were in their infancy this may be understandable, but steps need to be taken urgently, using existing media, to disseminate such information. Indeed, such dissemination about CDUs would redound to their own benefit.

National Curriculum Committee

What was most strongly desired was a mechanism for wide ranging consultation with the relevant public on educational policy. Not only should the process of consultation occur, but recommendations should be recorded, and there should be a clear policy for curriculum development which took these recommendations into consideration, and which was communicated to the education system at large.

Curriculum Development Officer

There should be a leader with access to a team of persons with competence in the various aspects of curriculum development. The team should report to the leader on matters within the leader's jurisdiction. The leader should have responsibility for coordinating all curriculum development. This should be a full-time post.

Staff and Resources

The Curriculum Development Officer should head a team of trained persons and should be allocated physical space and financial resources. While the human and physical resources need not be used exclusively for curriculum development, involvement in other activities should not prejudice their curriculum development functions.

Specialists are likely to be needed in: curriculum development, the various subjects on the school curriculum, media/production, and research/evaluation.

Resource Centre

It is desirable that the physical location of the unit also serve as a resource centre for teachers and students, or at least that there be a close relationship with such a centre. This has implications for storage space as well as display and work areas.

Target Groups

The activities in all territories have been heavily focused at the primary level. This is understandable, given that secondary and other levels tend to benefit more from curriculum development associated with external examinations. However, there is still a need for assistance with the translating of syllabus objectives into workable teaching and assessment strategies at the territorial level, and for influencing decisions about adoption or adaptation of such curricula. The territories also need the capability to engineer and respond to changes in externally produced curricula, as well as to develop curricula to satisfy local needs and for exceptional students.

Types of Materials

A variety of materials have been produced across the region in various subject areas. The focus has, however, been heavily on print materials. This must necessarily be the emphasis at the materials writing stage but support of implementation will demand the production of non-print materials as well.

Research and Evaluation

Although a few detailed evaluation studies were encountered, support, monitoring and evaluation of disseminated materials have generally been inadequate. This may well have been a key factor in producing the modest ratings of effectiveness of curriculum activity.

Relationship with Teacher Education

Given that teachers will be the implementers of curricula, there must be close relation between teacher education and curriculum development. There would appear to be considerable value to both curriculum development and teacher education if college-tutors were involved in the work of the unit, though work loading would need to take account of their other responsibilities.

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