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Source: *Canadian Journal of Education / Revue canadienne de l'éducation*, Vol. 14, No. 3 (Summer, 1989), pp. 295-310

Published by: [Canadian Society for the Study of Education](#)

Stable URL: <http://www.jstor.org/stable/1495360>

Accessed: 08/09/2013 14:19

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Characteristics of Canadian Curricula*

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Provincial curriculum guidelines in Canada, to judge by representative documents from each province, all contain objectives and lists of subject matter, but vary widely in their description of learners, management of aptitude differences, and specification of materials, facilities, and personnel. Evaluation, both of learner achievement and of program success, is rarely dealt with in detail. Curricula are developed almost entirely by professional educators, and the schools' clients are largely unrepresented either on curriculum committees or as respondents in needs assessments. More extensive sharing of curricula among provinces is proposed as one strategy to improve provincial curriculum writing in Canada.

Au Canada, les directives provinciales concernant les programmes, à en juger d'après des documents représentatifs provenant de chaque province, contiennent tous des objectifs et des listes de sujets à étudier, mais elles présentent de grandes différences du point de vue de la description des élèves, de la prise en considération des divers niveaux d'aptitudes de ceux-ci et des précisions quant au matériel, aux installations et au personnel. L'évaluation, tant des apprentissages des élèves que de la qualité du programme, est rarement abordée en détail. Les programmes sont élaborés presque exclusivement par des éducateurs professionnels et les écoles sont largement sous-représentées dans les comités responsables des programmes ou parmi les répondants à des questionnaires portant sur l'évaluation des besoins. On propose, à titre de stratégie pour améliorer la rédaction des programmes provinciaux, un échange plus systématique des programmes entre les provinces.

PROVINCIAL CURRICULUM DEVELOPMENT

Curriculum development is a large-scale operation in Canada. Each province maintains curricula for the numerous programs offered in its schools: Alberta, for example, lists over 200 curricula for grades 10–12 alone (Alberta Education, 1978). Periodic revision and innovation produces hundreds of new or revised provincial curriculum documents each year. Many school boards publish detailed curricula based on provincial guidelines, and individual schools, departments, and teachers produce curriculum documents as course outlines and descriptions.

This investment in curriculum writing may represent the triumph of hope over experience. There is little evidence that the quality of classroom

*This article was accepted for publication in 1987 April.

teaching is much influenced by curriculum writing at the state or provincial level. Provincial guidelines do offer parameters for selection of subject matter and this may have some impact. But provincial curriculum reviews frequently express dismay at the low level of implementation of official guidelines (Ontario Ministry of Education, 1985). The study of curriculum implementation has arisen in recognition that many variables intervene between adoption of official guidelines and realization of change in schools.

This is not to say that curriculum planning is unimportant. Research on school and classroom effectiveness shows that dedicated planning of learning conditions is a major factor in student achievement (Bloom, 1984; Walberg, 1984). Such considerations apart, curriculum documents merit attention for two reasons. First, they are fascinating cultural artifacts. Like authorized textbooks, they imply the values of a society through definition of subject matter, objectives, and curriculum rationales. Second, provincial curricula indicate how well curriculum development is currently being done and serve as models. This study is concerned with the second, the state of the art in curriculum planning in Canada as embodied in provincial curriculum documents.

Few studies of Canadian curricula across disciplines have been conducted on a national basis. Provincial curriculum guidelines have been extensively studied only in science education (Orpwood & Souqué, 1984; Finegold & Mackeracher, 1986). The Council of Ministers of Education has published descriptions of curricula in Canada in various subjects (Council of Ministers, 1979, 1981, 1982, 1983, 1985). Critiques by Neatby (1952) and Barrow (1979) were until recently virtually the only serious general studies of aspects of Canadian curricula. This paucity of scholarship was to a considerable degree remedied by the publication in 1986 of Tomkins's *A Common Countenance: Stability and Change in the Canadian Curriculum*. This book provides a diachronic basis for understanding curriculum in Canada and is distinguished by its thoroughness, balance, and incisiveness. Students of the Canadian curriculum will for long be in Tomkins's debt.

The question remains: What are the characteristics of curricula developed at the provincial level in Canada?

For the purposes of this paper, a curriculum may be defined as "an organized set of educational intentions." These intentions include not only what students are expected to learn, but also such other factors as recommended instructional strategies and materials, prerequisite learnings, management of individual differences, required facilities and personnel, and so on. The definition implies two primary sets of considerations for curriculum planning. On the one hand, there are questions about the validity, significance, and meaning of the intentions. These are questions of value that cannot be reduced to questions of technique. On the other hand, there are

TABLE 1
Subject Areas of Documents

History/Social Studies	18
Language Arts	14
Science	14
Physical Education/Health	11
Mathematics	10
Family Studies	10
Drama	7
Geography	3
Music	3
Other*	10

*Accounting, Anglais, Art, Christian Ethics, Computer Studies, Driver Education, Economics, French, Lifestyles, Personal Life Management

questions about the organization of these intentions, their completeness, coherence, clarity, and practicality. These questions are both ideological and technical. The concern of this paper is with the second set of questions. Questions of the nature and quality of themes, concepts, and topics included in Canadian curricula, while in urgent need of attention by scholars, are not the primary focus of this study. It is my more modest intention to produce a first description of Canadian provincial documents in terms of what they include and what they omit.

In 1986 March, I wrote to the Director of Curriculum or equivalent in each of the provinces and territories to request copies of general curriculum regulations and of official curricula in Science, History, English, and Family Studies. Both territories and all but one province replied.

THE SAMPLE

About half of the 100 documents reviewed here came as hard copy, and the rest from an ONTERIS (Ontario Education Research Information System) file containing microfiche copies of provincial and territorial curricula.¹

Since the Yukon and Northwest Territories produce very few of their own curricula, instead using British Columbia and Alberta curricula, no Yukon or N.W.T. curricula were included in the sample.

To obtain provincial samples comparable in terms of curriculum subject and with a balance of traditional and newer disciplines, the sample from each province contained at least one curriculum in each of History or Social

Table 2
Production Characteristics

<i>Province</i>	<i>Mean pages</i>	<i>Number printed</i>	<i>Number illustrated</i>	<i>Usual binding</i>
British Columbia	101	6	4	Sewn
Alberta	57	9	1	Sewn or loose leaf
Saskatchewan	74	3	2	Corner staple
Manitoba	144	0	2	Loose leaf
Ontario	74	10	5	Sewn or magazine
Quebec	68	10	0	Magazine
New Brunswick	78	0	0	Corner staple
Nova Scotia	66	1	0	Plastic spiral
Prince Edward Island	33	0	0	Plastic spiral
Newfoundland	47	0	0	Not ascertainable
<i>Total</i>		39	14	

Studies, Language Arts, Science, Mathematics, Physical Education and Health, and Family Studies. The distribution of subjects in the sample is shown in Table 1. In each provincial sample, at least four of the curricula came from Elementary grades, and at least four from Secondary grades. The median date for each province ranged from 1979 to 1983, and for the total sample, 1981.

DOCUMENT CHARACTERISTICS

Production Characteristics

Production characteristics of curricula—format, illustration, and so on—by province are shown in Table 2. In general, curriculum documents were less attractive than they could be. A typed, stapled document does not carry the same message as a glossy, illustrated, printed publication.

The Authors

More than 500 educators were named as members of writing committees in the sample. In all Quebec documents, as in most Nova Scotia documents, authorship was anonymous. Elsewhere names and affiliations of members of the writing committees generally were given. The size of the committees ranged from a median of 3 persons in Prince Edward Island to 13 in Ontario, with a national median of 9.

Authors were predominantly educators, most often teachers and typically with one or two representatives of the Ministry or Department of Education. Professors sat on most committees in Manitoba, Ontario, Saskatchewan, and Alberta, but on few elsewhere.

Non-educators were shown as committee members for only eight curricula. For example, the committee for the Newfoundland *Family Living 2200 Curriculum Guide* (1983) contained a physician and a social worker, and the Newfoundland *Theatre Arts 2200 Course Description* (1982) committee included a theatre director. Only two committees, both in Saskatchewan, listed a school trustee among their members. The writing of school curricula in Canada was apparently controlled by purveyors of services to the exclusion of consumers of services. The clients of the schools—parents, employers, students, and taxpayers—were unrepresented.

Needs Assessment

Over the past two decades, the practice of needs assessment has developed in social and educational policy making as a means of collecting information on which to base planning decisions (Witkin, 1984). A needs assessment typically collects two kinds of data. Empirical information is gathered on relevant social indicators, such as employment, health, consumption, literacy, student achievement, and so on. Opinion data is also collected from three main classes of people: experts, who have special information or expertise; clients, who have a right to be consulted; and gatekeepers, whose political status gives them potential control over implementation of the curriculum.

Scholars do not universally accept needs assessment in developing curricula (Barrow, 1984). It becomes a cynical political stratagem if used to put curriculum to referendum. Needs assessments should inform, but not necessarily determine curriculum decisions. Although it is judicious to determine public opinion prior to making public proposals, the fundamental ethic of needs assessment is respect for the client. Apart from its ethical significance, such respect, as Fullan (1982) points out, is critical to successful implementation of change. Only Quebec curricula mentioned needs assessment. Those provinces not reporting needs assessments rarely gave any full explanation of the sources from which their proposals derived.

Rationale

Sixty-five of the 100 documents, including at least half of the documents from each province, contained an explicit rationale. Rationales in the provincial documents ranged from four pages in the Ontario *Dramatic Arts Curriculum* (1981) and the Manitoba *Science 100 Guide* (1982) to brief one-paragraph statements found in most documents.

Aims and Objectives

Aims in the curricula I examined were multiple rather than singular. Although the point is disputable, I take the position that it is good communication and good discipline for curriculum designers to make a single statement expressing the purpose of a curriculum. Current practice in successful corporations (see Peters & Waterman, 1982, especially pp. 65, 153) supports this position. Singular aims were found in only 13 of the 100 documents. All Quebec documents contained a single aim ("objectif terminal") for each of the modules of which they consisted, and the most recent Quebec documents also included an aim ("objectif global") for the curriculum as a whole. Some examples of singular aims follow.

Quebec: *Programme d'études: Secondaire; Art dramatique* (1983)

La programme d'art dramatique veut rendre l'élève apte à utiliser la langue dramatique comme moyen d'expression, de communication et de création tant sur le plan individuel que collectif. (p. 9)

New Brunswick: *Elementary Health Education* (1981)

The overall objective of the Health Education program should be to develop citizens who are able to incorporate health information and principles into life situations so as to achieve and maintain the highest level of well-being. (p. 3)

Nova Scotia: *Geography Grades 10–12 Revised Guidelines* (1979)

The main aim of the course is to develop in students an awareness of the processes that have contributed and continue to contribute to the shaping of our physical environment, both at a local level and across the globe. (p. 10)

The nature and use of objectives varied widely in the documents. In some cases, objectives were explicit and tightly coupled with content. This was notably the case with the Quebec "Programmes d'études," which consisted essentially of hierarchies of an "objectif global," "objectifs généraux," "objectifs terminaux," and "objectifs intermédiaires," the last explicitly linked with subject matter. In many curricula from other provinces, objectives were indistinguishable from lists of subject matter.

Objectives embodied a positivist epistemology in their almost exclusive attention to cognition. As Table 3 shows, only 20 documents contained objectives referring to the development of the self—meaning, identity, or relationships—in ways that transcended the cognitive, and they were mainly in such non-traditional subjects as Theatre Arts, Family Living, or Health. Even then, phraseology is often in terms of cognition.

British Columbia: *Family Management: Curriculum Guide and Resource Book, Grade 11* (1985)

To develop an understanding of self in relation to others. (p. 2)

Alberta: *Elementary Health Curriculum* (1983)

Learns how to make and keep friends. (p. 71)

Manitoba: *Lifestyles 205 Interim Guide* (1982)

Develop an understanding of self as a sexual being. (p. 5)

New Brunswick: *Family Living 122* (1976)

To appreciate that rewarding relationships depend on nonexploitation and positive concern for others. (p. 5)

Despite extensive mention of objectives, priorities among them were rarely given. The implication is that all objectives were equally important, and that all teachers and all students should seek to achieve all of the. Only four Quebec curricula classified objectives as "obligatoires" and "facultatifs." Orpwood and Souqué (1984) observed that Canadian science curricula often contained a multiplicity of aims, priorities among the aims were rarely clear, many aims appeared to have only rhetorical value, and aims and objectives often did not match. My findings suggest this to be true of Canadian curricula in general.

TABLE 3
Rationale, Aims, and Objectives

	Number of curricula with:		
	<i>Rationale</i>	<i>Singular aim</i>	<i>Personal/social objectives</i>
British Columbia	7	1	2
Alberta	7	0	5
Saskatchewan	7	0	1
Manitoba	5	0	3
Ontario	8	1	3
Quebec	7	5	0
New Brunswick	6	1	2
Nova Scotia	5	2	1
Prince Edward Island	5	0	0
Newfoundland	8	3	3
<i>Total</i>	65	13	20

TABLE 4
Evaluation of Learner Achievement

	<i>Number of curricula providing evaluation</i>		
	<i>suggestions</i>	<i>examples</i>	<i>criteria</i>
British Columbia	5	4	0
Alberta	2	2	0
Saskatchewan	7	1	0
Manitoba	4	2	1
Ontario	8	3	2
Quebec	10	0	1
New Brunswick	3	2	1
Nova Scotia	8	3	0
Prince Edward Island	2	2	0
Newfoundland	10	1	0
<i>Total</i>	59	20	5

Evaluation of Learner Achievement

Of 100 documents, 59 made suggestions on evaluation of student learning; 20 gave examples of tests or test items; only 5 provided clear and explicit criteria for evaluation. A summary by province is shown in Table 4.

Some provinces provide information and guidance on evaluation separately from curricula. In Ontario, the Ontario Assessment Instrument Pool offers collections of test items to teachers of most subjects. British Columbia publishes an annual *Table of Specifications* which provides detailed descriptions of the provincial Grade 12 examinations in core subjects and shows numerous sample questions. In at least one subject, a Saskatchewan curriculum guide (*English: Student Evaluation*, 1980) offered highly practical information and recommendations for teachers in evaluating student achievement. Quebec gives evaluation advice in “Programmes d’études” and teachers in each school leaving subject receive a “Guide pédagogique,” a “Guide d’évaluation en classes,” and an Information Document (Gouvernement du Québec, 1987, p. 4).

Description of the Learners

Any reader of a curriculum will ask for whom it is planned. Almost all curriculum documents identified prospective learners by grade level but only

TABLE 5
Learning Materials

	<i>Number of curricula</i>				
	<i>listing texts</i>	<i>listing teacher references</i>	<i>listing AV materials</i>	<i>listing computer software</i>	<i>including materials in document</i>
British Columbia	3	6	2	0	1
Alberta	8	4	1	0	0
Saskatchewan	6	4	2	0	0
Manitoba	1	8	3	0	2
Ontario	0	4	2	0	1
Quebec	0	7	0	0	1
New Brunswick	7	9	2	1	2
Nova Scotia	5	9	5	0	0
Prince Edward Island	8	5	3	0	2
Newfoundland	3	6	4	0	1
<i>Total</i>	41	62	24	1	10

18 described learner characteristics in any detail. Perhaps designers believed teachers were so intimately involved with students that such description would be redundant, or that the diversity of students defied generalization. Although some of the sample curricula asked for completion of previous courses or grades, none offered detailed guidance on prerequisites or pretesting.

Curriculum Content

Curriculum content—the subject matter and methods of instruction—is traditionally the major and sometimes the only area detailed in curriculum documents. Despite the research and rhetoric on objectives, curriculum content expresses most directly the developers’ intentions and has most impact on teachers’ instructional decisions.

Almost invariably, the documents in this sample gave detailed lists of topics, concepts, or themes. Most also suggested pedagogical strategies, although some published objectives and subject matter separately from teaching strategies. Quebec’s *Guides pédagogiques* include detailed recommendations for instruction as well as sample lessons and learning situations. Ontario, Nova Scotia, and British Columbia have similar publications.

APTITUDE DIFFERENCES

One aspect of student diversity that interests teachers is variation in aptitude. Aptitude, reflected most clearly in speed of learning, varies widely in any given subject area from student to student, and this presents teachers with numerous questions. Must slower learners master all the same objectives as faster learners and, if so, how? What strategies would help slower learners avoid failure and frustration? How can underachievement be diagnosed and remediated? How can curriculum content be adapted and what special teaching methods are most appropriate for slower and faster learners? how can the marginal time of faster learners be used effectively? What enrichment materials are provided in the curriculum? What provisions are there for acceleration?

Such questions were dealt with in only a minority of provincial curricula. A total of 11 curricula referred to the special needs of slow learners, typically those in such special programs as the Basic Program in Ontario and the Adjusted Program in Nova Scotia. Only three curricula mentioned the special needs of faster learners. The absence of attention to aptitude differences in a curriculum implies an official position that learners at a given level are homogeneous in aptitude and that all learners can and should master the same objectives. Since teachers find both positions untenable, those positions can only weaken the credibility and impact of official curricula.

Learning Materials

One of the primary factors affecting the implementation of curricula is whether the curriculum contains or is accompanied by high quality practical instructional materials (Fullan, 1982; Werner, 1981). In some provinces, learning materials were not dealt with in curricula but in supporting documents (*Guides pédagogiques* in Quebec; *Circular 14* in Ontario; *Media Resources Guides* in British Columbia). As Table 5 shows, about half of the curricula listed textbooks or teacher references and about a quarter listed audiovisual materials.

Ten curriculum documents included some learning materials. The *Manitoba Social Studies Grade 11 Interim Guide* (1984), for example, included map outlines ready for duplicating. The British Columbia *Junior Secondary Science Curriculum Guide and Resource Book* (1985) contains several "Student cards" that provide detailed instruction, illustrations, and assignments on such topics as measuring mass, focusing the microscope, and writing a lab report.

An omission of some significance was that 99 of the 100 documents listed no supporting computer software. The sole exception was the New Brunswick

Accounting 122 Curriculum (1982), which listed 14 programs. There are now thousands of computers in Canadian classrooms. But the computer is unlikely to be integrated into instruction until it is integrated into curriculum documents.

Consumables, Equipment, and Facilities

Many a battle has been won or lost by logistics (Van Creveld, 1977), and such curriculum logistics as materials and facilities, though relatively unglamorous, can make or break a curriculum. Consumables are materials used up in instruction that have to be replaced—paint, paper, chemicals, modelling clay, typewriter ribbons, and so on. Only four curriculum documents mentioned consumables.

Almost every curriculum requires equipment, whether an overhead projector, a tape recorder, microscopes, a globe, or a volleyball net. Fourteen documents mentioned equipment. The British Columbia *Elementary Science Curriculum Guide* (1981) is a model in this regard, containing a 12-page list of consumable and non-consumable materials and equipment for teaching science, and the quantity required for each school.

Facilities are the teaching space required for a particular program. A program in swimming or auto repair has special requirements for facilities. So do programs in Theatre Arts, Physical Education, Art, Music, and Science. Although architectural features can rarely be modified, several environmental factors can be manipulated, including classroom layout, noise, temperature, lighting, and decor. Teachers do not always give such factors much thought, which is a good reason for making pertinent suggestions in the curriculum. Unfortunately, provincial curriculum planners do not appear to give these factors much thought either. Eleven curricula, mostly in Drama and Physical Education, mentioned facility requirements.

Personnel

The success or failure of a curriculum will depend primarily on teachers who instruct it. At the same time, teachers undertaking to implement a new curriculum need to know exactly the extent of their responsibilities. Only six curricula indicated qualities required of teachers, and only six what responsibilities would be entailed.

Despite the critical role of the school principal in curriculum implementation, much discussed in recent research (Fullan, 1982; Leithwood & Montgomery, 1982), none of the documents in the sample mentioned the role of the principal.

No document mentioned the support that such persons as guidance

counsellors or teachers of other subjects might provide. Despite the advocacy of integration of school resource centres into curricula and programs in such statements as Ontario's *Partners in Action* (1982), no document indicated a role in the curriculum for the school resource centre or librarian. No document mentioned people outside the school who could be recruited to assist or enrich the instructional program.

Time and Cost

Time is the principal resource consumed by schooling. Most curricula in Canada are planned for a one-year time format, typically about 100 to 120 hours per year. Detail regarding the allocation of these hours to the components of the curriculum was given in 25 of the documents.

Instructional hours are not the only time a curriculum requires. Students may be required to commit further amounts of time for homework or field trips. Teachers will usually have to commit time outside of class for planning, administration, remediation, and evaluation. Non-instructional time requirements were not dealt with in any of the curriculum documents.

Time is the most significant cost involved in schooling, but most curricula entail financial costs as well. When a curriculum requires special expenditures, these need to be shown in documents so that the funds can be allocated in advance. Only one curriculum dealt with costs, the Newfoundland *Theatre Arts 2200 Course Description* (1982).

Program Evaluation and Field Testing

Just as schools need guidance in evaluating student learning, they also need advice on evaluating the success of a curriculum as a whole. Without such evaluation, systematic improvement of curricula after adoption is unlikely. Only 14 of the documents suggested criteria for the evaluation of the program.

The success of a curriculum innovation will depend to some degree on "debugging" the program through pilot (small-scale) and field (typical use) tests conducted prior to wide-scale implementation. Unless a program is adequately tried out, the costs of defects will usually be passed downwards to users and consumers, that is, to teachers and students. Only four documents referred to pilot and field tests. At the most detailed, these four documents listed the names of schools and teachers who piloted the curriculum, but the results of these trials were not given. Information about field tests, where they were conducted, by whom, with what results, and how the document was subsequently modified would add greatly to the credibility of a curriculum and would indicate sources from which implementors could seek information and advice.

One curriculum paid serious attention to the desirability of feedback from teachers for further refinement of the curriculum. This was the draft document for British Columbia's *Family Management Curriculum Guideline and Resource Book Grade 11* (1985), which provided several pages on which teachers could submit suggestions.

CONCLUSIONS

Provincial curriculum documents vary widely in content and quality, both among and within provinces. Virtually the only commonality among Canadian curriculum documents is that almost all are approximately the same shape (8.5"x11" in 9 provinces, 21x30 cm in Ontario). If the best features of the best Canadian curricula were combined, the resulting documents would be excellent by any standard.

This raises questions about the provinces developing curricula in isolation. Local curriculum development is likely to increase local commitment to curricula, but there is no reason why all local curriculum development has to start *de novo*. There was little evidence in the documents in this sample that curricula from other jurisdictions had been read or used. This parallels the lack of international cooperation in curriculum development. Possible explanations include the time, cost, and effort of such cooperation; the subsequent need to share ownership of and credit for curriculum innovation; and the low political value of such intangibles as improved classroom instruction. Some interprovincial exchange of curricula does take place, however, and is facilitated by meetings of provincial Directors of Curriculum which are convened periodically by the Council of Ministers of Education (C. K. Brown, Director of Instruction, Newfoundland, Personal Communication, 1987 February).

In general, provincial curriculum documents are abreast of the state of the art in curriculum development of about 1970. Table 6 summarizes the differences on selected characteristics between the documents published in and prior to 1981 and those published since 1981 (three documents bore no date). The more recent documents are more likely to include a rationale and to contain some discussion of evaluation of student learning. Otherwise there has been little change. Provincial curricula have yet to take advantage of the advances in curriculum development of the past decade, particularly those evolving from research in such areas as Needs Assessment, Mastery Learning, School Effectiveness, and Program Evaluation. This report has indicated many curriculum components which provincial documents usually deal with cursorily or omit altogether. One of the most significant areas of weakness is the absence of priorities and of clear criteria, qualitative or quantitative, for evaluation of either learner achievement or program success. During the period 1975–1985, when most of these guidelines were produced, issues of

TABLE 6
Selected Characteristics by Date

	1970–1981 (N=50) %	1982–1986 (N=47) %
Rationale	52	79
Singular aim	12	13
Evaluation of learning	56	83
Description of learners	12	28
Time allocation	24	32
Program evaluation	16	9

evaluation suffered considerable neglect in many Canadian jurisdictions. And, in fact, the separation of instruction and evaluation has been an unfortunate feature of the history of curriculum. But to leave decisions in this area to individual teachers appears to vitiate a central concept of provincial curriculum planning, the provision of a minimal education for all. This is particularly the case as measurement of achievement is a notoriously weak area of teacher education programs and a field in which most teachers feel insecure.

The other major area of concern in Canadian curricula has deeper implications. It was noted earlier that the clients of the schools—parents, employers, taxpayers—are ordinarily excluded from curriculum committees. Nor are their views accessed by means of needs assessment. Curriculum development is a process carried out almost entirely by educators, and the need for client opinion is ignored. Also ignored is the need for empirical data, both from needs assessment before the curriculum is developed and from field testing after development. The approach therefore is almost entirely bureaucratic and political: the development of curriculum is viewed as a quasi-legislative activity of writing rules and regulations.

Over the past 15 years, many detailed curriculum decisions have been made behind closed doors in provincial cabinet meetings and in the offices of provincial Ministers of Education. Such decisions are often made in response to pressure from individuals, special interest groups, and the media. This is an invisible influence in official curriculum documents. Its assessment awaits badly needed participant observation studies of curriculum development at the provincial level.

There are practical and ethical concerns with the bureaucratic model of curriculum development. Practically, the best decisions are unlikely to emerge from ignorance of relevant data. But, more significantly, if democ-

racy means anything at all, it must entail the principle that those affected by decisions have the right and the opportunity to contribute to the formulation of those decisions. This principle has not as yet much affected curriculum decision making in Canada.

NOTE

- ¹ Exigencies of space prevent inclusion of the titles of the 100 documents analyzed. The list may be obtained from the author.

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