

TOWARD AN ANALYTICAL MODEL FOR
THE EVALUATION OF CURRICULUM GUIDELINES

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ABSTRACT OF
Toward an Analytical Model for
the Evaluation of Curriculum Guidelines

Curriculum guidelines have not proven to be a major influence on the deliberations of teachers in decentralized systems where much of the curriculum decision making takes place at the local level. Instead, teachers have relied more upon their own perceptions of pupil needs and past practices. As a result, central or controlling agencies in such systems cannot be assured that the curriculum being implemented in classrooms is consistent with the intentions expressed in the guidelines. Three interrelated variables contribute to this problem situation. First, decentralized systems which depend primarily upon guidelines as a means of controlling practice permit curriculum makers to either misuse or ignore the guidelines. Second, curriculum systems which have a history of transition from a strong central control through the issuance of prescribed courses of study, entrance and exit examinations set out by the controlling agency, and a normative mode of teacher education, to a decentralized system whereby the controlling agency issues guidelines without adequate attention being drawn to the changes and their implications for practice foster attachment to past practices. Third, there has been an apparent lack of adequate criteria and procedures for curriculum makers to use for the critical examination of guidelines in order to clearly understand their intents. This study focusses upon the third variable contributing to the problem situation for it is an attempt to generate an Analytical Model made up of questions and procedures that direct a critical examination of curriculum guidelines.

The research question to which the study attends is, "What should be the criteria and procedures used to conduct an independent and objective study of curriculum guidelines?" It was determined through an examination of: a) the nature of curriculum systems of varying structure, b) the history of curriculum change in the Province of Ontario, and c) the current practice of teachers as curriculum decision makers, that a response to this question would serve to offset the effects of the other two variables mentioned as influences on the problem situation.

A review of literature on curriculum theory and content analysis led to the conclusions that: a) curriculum theory, as a field of study, is pluralistic, b) five general concepts about the nature of curriculum theories emerge from the literature and c) an adequate model to guide the critical evaluation of guidelines in an objective way should accommodate the pluralism, the general concepts and permit its user to step outside the guidelines and look back in at them without adhering to the bias of any one theory.

The five general concepts about the nature of curriculum theories that present themselves in the literature are:

1. A curriculum theory should make clear the value position and sources upon which a curriculum should be built.
2. A curriculum theory should specify characteristics of a curriculum design.
3. A curriculum theory should describe essential processes for making curriculum decisions and the interrelationships among those processes.

4. A curriculum theory should provide guidelines for continuous evaluation of curriculum decisions.
5. A curriculum theory should include definitions of its key terms.

These concepts were used to generate five main questions and a number of sub-questions to be directed to any guideline in order to conduct an independent and objective analysis of it. Procedures used to generate the questions and apply them to guidelines were taken from the literature on content analysis.

The Analytical Model, consisting of five main questions, accompanying sub questions and procedures for applying them, was tested by applying it to a curriculum guideline in order to determine the viability of the questions and procedures as an adequate framework within which to conduct an evaluation of such documents. The five main questions used to identify key statements in a guideline, and the sub questions used to guide judgement of the statements, are listed below.

1. What value positions did the writers take as reflected in: statements of ideology, statements of general goals for a curriculum, statements identifying sources for a curriculum's content, statements identifying beliefs about the nature of learners for whom the curriculum should be designed, and statements identifying learning theories that should influence curriculum decisions?
2. What statements did the writers of the documents make to give direction to the design or organization of the curriculum content?
 - a. How are the stated goals of the curriculum reflected in statements giving direction to the design or organization of the curriculum?

2.
 - b. How are statements on content sources for the curriculum reflected in statements giving direction to the curriculum's design or organization?
 - c. How are statements on the accepted view of the nature of learners reflected in the statements giving direction to the design or organization of the curriculum?
 - d. How are statements indicating the accepted theories of learning reflected in statements on the design or organization of the curriculum?
3. What statements did the writers of the documents make in order to give direction to the development of the curriculum and use of the curriculum?
 - a. How are the stated goals of the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?
 - b. How are statements on the content sources for the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?
 - c. How are statements on the accepted views of the nature of learners reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
 - d. How are the statements indicating the accepted theories of learning reflected in statements giving direction to or criteria for the evaluation of curriculum decisions?

4. What statements did the writers of the documents make in order to give direction to the assessment of curriculum decisions?
 - a. How are the stated goals of the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
 - b. How are the statements on the content sources for the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
 - c. How are the statements on the accepted views of the nature of learners reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
 - d. How are the statements indicating the accepted theories of learning reflected in statements giving direction to or criteria for the evaluation of curriculum decisions?
5. What definitions were given to terms used in statements responding to the first four questions directed to the broad analysis?

Results of the study indicate that the questions and procedures provide an adequate approach to the analysis of curriculum guidelines. One modification, however, was implicit in the findings. The questions dealing with the nature of learners and learning theory (2c, 2d; 3c, 3d; 4c, 4d) should be amalgamated due to the obscurity of the dividing line between these two conceptual areas.

A comparison of the Analytical Model developed in this thesis with five other curriculum analysis schemes demonstrates that other approaches are restricted by their scope and biases. Such restrictions limit their capacity to be used in a comprehensive analysis of curriculum guidelines where disclosure of meaning without the imposition of pre-set values is important.

Future uses of the model would include the development of manuals for guideline writers as well as guideline users. Curriculum researchers may use the model to conduct comparative analyses of two or more curriculum guidelines or curriculum systems.

Studies growing out of this thesis could involve: the application of the model to several guidelines in order to endorse the scope of the questions used in the model, and the testing of the model as an instrument to assess curriculum materials other than guidelines.

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CURRICULUM STUDIORUM

William Gar White was born April 13, 1939 in Peterborough, Ontario. He graduated from Peterborough Teachers' College in 1960. He received a Bachelor of Social Sciences degree from St. Patrick's College, University of Ottawa, in 1967. In 1971 he received the degree of Master of Education from the University of Ottawa.

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Chapter I

INTRODUCTION

Curriculum guidelines, unlike courses of study, are not prescriptive. They extend some autonomy in decision-making to their users while, at the same time, providing a rationale for those decisions. Newsam (1976) described curriculum guidelines in the following way:

Guidelines are not guide-dogs. They are not intended to help along those who cannot see. Nor are they tram-lines, laid down to take the skill and adventure out of steering. Primarily, guidelines require us to ask the question 'Why?' and insist on staying for an answer. (p. i)

The statement suggests that guidelines "are not intended for those who cannot see". When those who are to use a guideline cannot see its general thrust or find within the guideline the answer to their question 'Why?' then its intention to allow its user to steer the curriculum is lost.

In spite of the best efforts of curriculum guideline developers to generate documents that serve to direct the activities of curriculum makers, while at the same time providing them with some autonomy, many teachers do not look to them as primary sources of influence on their decision-making. The cause of this problem situation goes beyond the guidelines themselves. The solution may lie in finding a means to mediate between the curriculum makers and their guidelines. This thesis examines the problem situation more closely and presents a model that may serve as a solution to it.

Within this introductory chapter a background to the problem is presented in order to identify some of those variables that contribute to it and point to a possible solution. The section of the chapter dealing with the background of the problem examines three contributing, interrelated factors. First the nature or structure of curriculum systems is examined to point out that certain structures, by their very nature, permit curriculum makers either to ignore or misuse curriculum guidelines. Second, using the Province of Ontario as a case in point, the history of curriculum decision-making within a system is presented as a contributing variable to the problem. The third factor examined is the noted absence of ways and means for curriculum makers to critically examine guidelines. It is this third factor that formed the problem and research question for the study at hand.

Following a discussion of the problem and purpose of the investigation, delimitations of the study and key terms used in it are presented. The chapter is concluded with an overview of the study wherein the purpose of each succeeding chapter is briefly outlined.

Background of Problem

Autonomy and Control

Control of curriculum whereby that which is implemented in school classrooms in the form of instructional programs clearly reflects those intents outlined in formal curriculum documents generated at a school system level can be achieved in two ways. First, as Beauchamp (1975) suggested, implementation of curriculum in a way consistent with intents is best achieved by those making the a priori decisions that give direction to the development and implementation of instructional programs. The

first approach to curriculum control would assume an autonomy for each school thereby making any one school a self-contained curriculum system. The second way to bring about control of the curriculum, especially across a school system of the magnitude of a province, state or nation, would be to develop a uniform curriculum at the system level to be rigidly followed in all schools making up the system. Such an approach would require a teacher-preparation system that is normative wherein teachers would be trained to implement instructional programs in prescribed ways.

Many school systems in western Europe and North America operate in a fashion that falls between the two approaches outlined above, whereby schools are given autonomy under the rubric of a central controlling agency. These systems are faced with the problem of rationalizing some ways and means to accommodate a degree of autonomy for schools or local jurisdictions while at the same time exerting some measure of control. The need to bring together the concepts of autonomy and control within the systems is attached to two prevailing value positions on the function of curriculum. First, the curriculum is viewed as a vehicle for enhancing and supporting the growth needs of the pupils it serves and this can be done best by giving over to the individual schools or teachers some autonomy in decision making. Second, the curriculum is seen as a vehicle for transmitting the culture or values of the society which the schools serve thereby making some measure of control at the societal level necessary. The weighting given to autonomy or control in a system reflects the value position taken by the province, state or nation involved.

Four Constructs of Systems

Differing emphases on autonomy and control in school systems generate differing structures among such school systems. Furthermore, the problems associated with curriculum control as exerted through dissemination practices vary by degree across the various structures. Wrigley and Sparrow (1976) conducted a comparative study of curriculum dissemination practices found in a number of European countries. Four concepts emerge from this study. They are presented here as the elements making up the two axes in a two-by-two design used to identify four different structures for curriculum systems.

Insert Figure 1 here

Each term used in the axes in and of itself is a label for a unidimensional description of a curriculum system. When each is combined with a term from the other axis the description of any one system is more extensive. One term used in the design is confined system.

(...) confined systems (...) are characterized by the limited variety of agencies they contain, the intimate connections that exist between development and dissemination and the lack of necessity for co-ordinating agencies because, in a sense, the systems are self-co-ordinated. (Wrigley and Sparrow, 1976, p. 96-97)

A second term employed is profuse system.

(...) profuse in contrast to the confined systems (...) contain a variety of development and dissemination agencies. Connections between development and dissemination are not well established. Indeed, because of the multiplicity of activities, they are difficult to establish and maintain. (Wrigley and Sparrow, 1976, p. 97)

NO. OF AGENCIES	FORM OF CONTROL	
	CENTRALIZED	DECENTRALIZED
CONFINED	SYSTEM A	SYSTEM B
PROFUSE	SYSTEM C	SYSTEM D

FIGURE 1
FOUR CONSTRUCTS OF CURRICULUM
SYSTEMS

In a centralized system, the third term used, the "focus and control of curriculum development" (Wrigley and Sparrow, 1976, p. 98), is in the hands of a central agency. Even innovations that may have been developed at a local level are funneled to the central agency for evaluation and dissemination. Finally, a decentralized system is one in which some autonomy in curriculum decision making is given over to local agencies or teachers. In the decentralized system, curriculum innovations can be developed and disseminated at the local level without having to pass through the hands of the central agency.

Centralized, Confined System - System A in Figure 1 would be characterized as having only one controlling agency in matters related to the development, implementation and evaluation of the curriculum. All curriculum activities would be confined to a strict code established and monitored by the central agency. The Wrigley and Sparrow (1976) study identified France, Denmark, and Ireland as having systems that fall into this category.

Decentralized, Confined System - System B in Figure 2 is more an ideal construct of what could be rather than a representation of what is. Such a system would be characterized as having a central agency represented in various localities through offices of that agency. Much curriculum development and dissemination would take place through the efforts of these offices but the decisions would not be entirely autonomous of the codes established by the central agency. The Federal Republic of Germany approaches this construct whereby "teachers have restricted autonomy in curriculum matters" (Wrigley and Sparrow, 1976, 97).

Centralized, Profuse System - System C in Figure 2 would have a central but permissive agency. The central agency would permit strong influence on curriculum development and dissemination to come from agencies outside its direct control. The Netherlands, which still has strong influences from its churches in curriculum matters in spite of the fact it has "legislated national curriculum guidelines and school leaving examinations" (Wrigley and Sparrow, 1976, p. 97), tends toward this category.

Decentralized, Profuse System - England and Wales fall into the category of System D of Figure 2. It is decentralized and profuse. In a summative description of the situation in England and Wales, Wrigley and Sparrow (1976) stated:

Curriculum development takes many forms, ranging from the activities of individual teachers to local group developments in teachers' centres and to national and regional curriculum development projects. These developments are funded mainly by the local education authorities or the Department of Education and Science, but private agencies, such as the Nuffield Foundation, make significant contribution. The Schools Council was established to promote and co-ordinate curriculum development but can only play a limited advisory role in relation to activities which it does not finance.

Curriculum dissemination occurs through Her Majesty's Inspectors, local education authority advisers and the Schools Council but, in addition, there is a wide range of other agencies in and out of education which participate in, or at least influence, dissemination. (p. 97)

A Mix of Systems - In the United States where education is a matter for the state rather than federal government, curriculum systems resemble a mix of both Systems C and D (of Figure 1). Here the federal government allocates funds for program development and through its

national office controls the type of development undertaken in the various states where federal funding is made available. In this way an institution (the federal government) influences systems that are the responsibility of state governments. Furthermore, local jurisdictions such as counties and municipalities are given freedom to make autonomous decisions about program. In actual practice, what is taught in schools would suggest an even greater degree of autonomy than is suggested by the formal structures. Walker (1971) and Ryan and Cooper (1980) suggested that it is the teachers within individual schools who in fact determine the curriculum and instructional program to be followed. The degree to which teachers are influenced by the formal curriculum documents of curriculum systems as opposed to their personally held theories and perception of what ought to be done and how it ought to be done is a question the answer to which may vary from system to system.

The situation in Canada is very similar to that of the United States except for the fact that the Canadian federal government is involved to a much lesser extent. Federal funding for programs offered to school children in the provinces is restricted to second language instruction. (Federal schools are operated for native children in the far north.) For the most part, the provinces are responsible for school programs within their respective systems while at the same time they assign to local jurisdictions some autonomy in curriculum decision-making. The size and topography of the country require many provincial governments to establish offices in various regions within their jurisdictions in order to facilitate the dissemination of curriculum materials and influence curriculum development and implementation in

ways consistent with the policies of the provinces. Ontario and British Columbia are two provinces that follow this model.

Need for Control

Curriculum control is exercised through the issuing of curriculum guidelines rather than rigid curricula to be implemented in provincial systems where some autonomy for decision making is given over to local jurisdictions. In Ontario, British Columbia and some states in the United States, guidelines are issued by the provincial ministries and state departments of education. The intent of the guidelines is to influence the decision making at the local or school level in ways consistent with the policies of the provincial or state governments. Beauchamp (1975) pointed out that in some states where curriculum guides have been issued they have initiated "accountability schemes" (p. 147). Similarly, in the province of Ontario, the Ministry of Education has launched a program to generate a bank of test items to be used in determining whether or not curricula that are consistent with Ministry policy are being implemented in the schools.

The need to introduce accountability measures indicates that guidelines do not adequately serve as control measures. The cause for guidelines not being sufficient to guarantee adherence to them by their users could be numerous. One such cause could be that the guidelines are not of any help to the classroom teacher or local jurisdictions in making curriculum decisions. Ryan and Cooper (1980) stated that guidelines "range in quality from being nearly worthless to acting as a source of helpful ideas" (p. 321).

A second explanation for teachers and other curriculum decision-makers ignoring guidelines, especially new guidelines when they are introduced, is the tendency for these persons to cling to past practices. Some of these practices identified by Ryan and Cooper (1980) are "to be influenced by such factors as what's available in texts, what other teachers are doing, (...), what the department has done in the past, the teachers' own preferences, seat of the pants intuition, how former students have responded to certain topics and learning experiences, what's happening in the media, and what college courses the teachers have taken" (p. 321).

A third motive for curriculum builders ignoring prescribed guidelines is rooted in the fact that many do not have a conceptual framework for critically examining guidelines in order to understand them better or recognize changes that have been inserted from time to time. This third motive may well explain the actions of those who cling to past experiences in curriculum work. It is entirely possible for a curriculum system to develop qualitative guidelines carefully and disseminate them among its various jurisdictions and teachers only to have them given passing notice. In such cases the jurisdiction is confronted by its own history and the lack of a conceptual framework for the examination of the guidelines.

Ontario - A Case in Point

History of Change - During Canada's first century the educational system of Ontario moved from a normative, centrally-controlled system to a more decentralized format giving increased autonomy to township and municipal boards of education through their respective supervisory and teaching personnel.

Commenting on the movement away from complete central control of curriculum planning the Minister of Education in 1949 reported:

In a gradual movement of this kind it is difficult to tell when the pendulum reaches the end of its swing, but one indicator of educational change is the examination system. With the rigidly defined courses there developed a series of departmentally organized examinations at various levels, of which the number was at a maximum around the turn of the century. Then the number of examinations was gradually reduced and the responsibility for promotion passed to the schools themselves, so that in the past few years there have been only two sets of external examinations. In 1949 announcement was made that the High School Entrance examination, one of the first of the central examinations to be set up in Ontario, would be abolished forthwith. It was made plain that this was a purposeful step in the process of decentralization by the accompanying announcement that transfer of the pupils from one division to another in the school system would be left to the local authority; that part at least of the authority for curriculum planning would be passed to the local level; and that a greater flexibility in school organization would be permitted. (Province of Ontario, 1949, p. 6)

Until this time the Ministry was able to exercise control over the content of the curriculum through province-wide exit examinations in spite of the element of teacher choice of curriculum topics.

Control of the curriculum content, however, was not carried out exclusively through the use of provincial examinations. The Province continued to operate its own teacher-education programs, publish courses of study, restrict the use of texts to those designated by the Ministry, and in the school inspector's role definition included responsibility for the preparation of programs of study.

By the nineteen fifties, further changes were on the horizon. Universalism was approaching, by definition, the concept that school

programs should be designed to meet the needs and interests of individual pupils. In 1950 the Minister of Education wrote:

Where formerly uniformity was thought desirable and a detailed curriculum was imposed by the central authority, local authorities are now being encouraged to prepare their own courses. Experiments are being carried on in the development of new curricula with particular reference to local needs and interests. (Province of Ontario, 1950, p. 7)

The experimentation of the nineteen fifties led to formalization of the changing philosophy in the sixties. The Ministry, through committees having teacher representation, began to produce documents to supplement the courses of study. However, the supplementary documents produced in the sixties were designed to guide boards and teachers in curriculum decision making in such a way that the programs produced would reflect a consideration of the needs and interests of the pupils. Reporting on the interim revisions to courses in 1966, the Minister of Education stated:

This revision has emphasized the importance of local adaptation of content and approach to serve the diverse interests and aptitudes of students. (Province of Ontario, 1966, p. xvii)

It is important to note that the interim revisions were not to replace the course of study but to be used in conjunction with it. The focus was on the adaptation of content and approach and not on absolute local autonomy in selecting curriculum content. It is clear, however, that the pupil was no longer required to adapt to a set course of study, rather, the course of study was to be adapted to the pupil's needs and aptitudes.

The Ministry's modification of one of its control variables is not insignificant when the problem created by it is examined. The rationale

for the modification was related to the changed philosophy about universalism and was clearly reflected in annual reports of the Minister and interim revisions to the course of study. The change in the controlling variable begs two questions: 1) How does this alteration fit into the rationale that gives direction to the whole curriculum system for Ontario elementary schools? 2) Should not other modifications be made to the curriculum to support the changed philosophy?

Indeed, other modifications to the system were to take place at an accelerated pace throughout the late nineteen sixties and into the seventies. Changes in the educational and curriculum systems, particularly those related to the elementary schools, were motivated by two significant reports: Report of the Minister's Committee on the Training of Elementary School Teachers, 1966, and The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario, 1968. Changes that followed these reports included: 1) the replacement of courses of study with curriculum guidelines and other support documents, 2) further decentralization of Ministry operations through the creation of offices located in ten different geographic areas of the province, 3) the creation of larger units of administration at the local level through a system of municipal and county school boards, 4) the disappearance of school inspectors reporting directly to the Ministry (Instead, school boards hired supervisory personnel licenced by the Ministry), and 5) the transfer of teacher education to faculties of education in universities. The principle of increased local autonomy in curriculum decision making continued with these changes.

In 1975 the Ministry of Education published Circular P1J1: The Formative Years, which is a guideline to persons developing curricula for use in grades kindergarten through six. This publication marked the end of a period that began with the introduction of interim revisions to the course of study in 1966. Between the years 1966 and 1975 the Ontario Ministry of Education moved from the issuance of courses of study supplemented by interim revision guidelines to the issuance of guidelines alone.

The nine-year period beginning 1966 was a period of both experimentation and confusion. The enlarged local boards were getting their administrative, supervisory, and consultative structures in place while at the same time trying out various ways and means of developing curriculum at the local level. Approaches to the curriculum challenge ranged from the appointment of consultants to develop materials, to the appointment of board level committees with teacher representation to develop materials, to leaving the whole process to the schools themselves. At the local level, the pressure was toward the development of programs and materials to support the programs. The products of the deliberation processes, no matter who was doing the deliberating, tended to be courses of study to be implemented across a board's jurisdictional area and/or rigid sets of resource materials to be used by teachers as aids to instructional planning.

Much of what was developed at the board and school levels was in response to the fact that the schools themselves were closest to the public eye. Beauchamp, (1975) in his examination of curriculum activities, noted:

Like many other functions in education, the curriculum function has responded more to the external pressures from an expanding culture than to internal examination, systematic research, and explanation. (p. 64)

Problems with Guidelines - The Ontario Ministry of Education, besides publishing and circulating curriculum guidelines and support materials, acted primarily in a consultative capacity to boards. Through its regional offices, curriculum consultants were made available to boards on demand. In most cases, the consultants responded to the needs of boards as identified by the boards.

In an address to chief education officers and senior program officials of Ontario school boards in 1972, The Honourable Robert Welch, Minister of Education, stated:

It is now the responsibility of each school to design a particular course of studies that respects the overall approach and philosophy stated in the guideline, but whose choice of vehicle or subject matter reflects the perceptions teachers form of the interests and needs of their own students. (...)

The question has often been asked, (In view of this trend in the nature of your guidelines, what is their status?). May I say that their status remains unchanged. They are, as they have always been, ministerially authorized statements concerning the nature of the program in the publicly supported schools of Ontario as provided for in the Department of Education Act. (p. 7-8)

The question to which the Minister was responding was motivated by the apparent difficulty curriculum planners were having in using the guidelines.

A survey of teachers in eight Ontario board jurisdictions conducted by the staff of Peterborough Teachers College in 1973 showed that teachers consulted pupil texts and professional teachers' texts more frequently than ministerial guidelines in planning courses of study for pupils. County and school level guidelines were consulted even less frequently than Ministry guidelines. Interviews of principals and superintendents of education revealed that there was no consensus among and between these

groups as to the teacher's role in curriculum. Some felt the teacher's role was to design a program of studies for his pupils, others felt that it was to adapt a program designed by someone else to meet the needs of his pupils, while a few felt the teacher's role was to implement a course designed by someone else without changes in content or sequence. Teachers, on the other hand, saw themselves primarily as curriculum designers except in the area of mathematics where more saw themselves as adaptors. The reasons given for this perception were: "no program available" (p. 4) "program available but vague", (p. 4) and "program available but not suitable to the needs of your pupils" (p. 4). The teacher's perception of role was based on what, in fact, he did do vis-à-vis programs for pupils. The principals' and superintendents' perception of the teacher's role was based on personal conceptions and not observation of practice. In spite of the intention of guidelines to shape the teacher's curriculum role, they were not receiving the attention expected. This point was confirmed by Reisman, et al (1974).

The 1975 publications from the Ministry were obviously designed to address the situation described above. By this point in time the "back-to-basics movement" had started. The Ministry's response to it was to demonstrate that direction was being given to the curriculum activities taking place at various levels of decision making. The Minister reported:

The input and development stages of the Primary/Junior Cyclic review culminated in the preparation of a package of materials related to curriculum for the early years of a child's formal education. This package includes a policy statement outlining general expectations with respect to different aspects of the Primary-Junior program; a comprehensive

rationale for the program, including suggestions for approaches and procedures that can be used to achieve its objectives; and a series of practical support documents illustrating these approaches and procedures that can be used to achieve its objectives; and a series of practical support documents illustrating these approaches and procedures in classroom terms at various levels and in various disciplines. (Province of Ontario, 1975, p. 6)

In spite of the purpose for the material stated by the Minister the problem of implementation persisted.

Popp (1977) reported that the two-tier system of decision making proposed in the 1971 curriculum guidelines for the primary and junior divisions in Ontario elementary schools whereby "the central Ministry would prepare basic guidelines, and the local school would translate these into practice with little or no mediation by board-level guidelines" (p. 2) had not worked effectively. Subsequently, this approach was modified to endorse curricular decisions being made at the board level. Even then the system lacked organization. Popp, (1977) stated:

In an organized system, areas of primary responsibility and areas of co-operative action would be a matter of common knowledge if not of agreement. Unfortunately, this is not the case at the present time. Various groups make decisions without interacting sufficiently to prevent proposals which are frequently inconsistent and sometimes antagonistic. (p. 2)

Leithwood and Wilson (1977) reported the results of a survey of issues facing boards of education. They found boards did not have policies regarding curriculum matters and they found them to be having problems with curriculum implementation, co-ordination of Ministry and board level guidelines, and student achievement assessment procedures.

The Ontario Ministry of Education recognized that boards were facing an implementation problem. Storey (1977) acknowledged:

One of the most difficult tasks that we have before us is to translate the kind of program that is outlined in a Curriculum Guideline into practice within the classroom. (p. 32)

In order to cope with this problem the Ministry adopted a number of steps. First, draft copies of guidelines are sent to Regional Offices of the Ontario Ministry of Education through which they may be shared with local boards for information. Second, the guidelines go through a validation process whereby the content and ideas in the guideline are examined for relevance as a further means of "disseminating information" (Storey, 1977, p. 32). The extent to which this second step is carried out is dependent upon the degree of change proposed in the guideline. Again, Regional Offices along with teacher education institutions are involved in the validation process. Third, completed guidelines are examined by representatives from Regional Offices and the Correspondence Education Branch, at the central office meeting. "This is to further develop the informational base for understanding of policy and other implications" (Storey, 1977, p. 33). Information-sharing meetings are held with publishers and media producers as well at this stage. The fifth and final step is the distribution of the documents to Ministry and senior officials within local school jurisdictions followed by direct mailing to the schools. In the end, "major responsibility for the implementation of the curriculum program" (Storey, 1977, p. 34) is placed upon "the local school jurisdiction" (Storey, 1977, p. 34). In spite of these efforts the guidelines published by the Ministry have not emerged as the strongest element of influence on teacher decision making in curriculum matters.

Leithwood, Ross and Montgomery (1978), in a study of curriculum decision-making processes among teachers across several local jurisdictions in the Province of Ontario, identified thirty sources teachers could use in curriculum decision making. (The sources are presented in rank order in Appendix A according to frequency of use.) Their findings clearly indicate that in actual practice, the curriculum system of Ontario is somewhat diffuse and decentralized and the element of control takes second place to autonomy.

In a study conducted by Robinson (1978) focussing exclusively on guideline usage, results indicate a trend toward more intensive and systematic use of guidelines by board-level curriculum committees. However, 40.7 per cent of the responses addressing the survey questions reported that the guidelines for the primary and junior divisions for the Province of Ontario are not being used to initiate and sustain curriculum activities at that level. Similarly, 35.1 per cent of the responses related to use of guidelines for the intermediate school years indicate the same level of non-usage. Robinson attributed the lack of guideline usage to the nature of the guidelines themselves and proposed an intervention scheme (Floyd G. Robinson, *The Scope of Guideline Aims and Objectives*, Toronto, OISE, 1978) to help teachers cope with such documents.

More recently Fullan and Park (1981) summed up guideline implementation attempts over the past fifteen years and indicated the kind of interventions needed in Ontario. They wrote:

Effective implementation or changing practice at the classroom and school level in regard to a new program or policy was rare enough in the 1970's to be called a "non-event" (Charters and Jones, 1973); it was so rare in the 1960's that it wasn't called anything. Some changes in practice did occur, but not nearly as frequently as was intended. The cumulative frustration arising from failed change attempts over the past fifteen years, combined with increasingly limited resources, forces us to consider what can be done to implement needed programs more effectively and to reduce the number of wasted efforts.

Summary - The situation in Ontario resembles that of England and Wales. The implemented curriculum is, to a large extent, that which is developed by individual teachers, or groups of teachers serving on board-level curriculum committees. Although teacher representatives do serve on provincial committees developing guidelines for the Ministry, and although there is some teacher representation in the guidelines assessment process, the system is not confined due to the degree of autonomy that is extended to teachers at the translation and implementation levels. It is entirely possible for teachers to develop and implement curricula that run contrary to the intended rationale of the Ministry. As noted in the findings of the study by Leithwood, et al. (1978), those influences that would tend to make the Ontario elementary school system more confined are ranked eighteenth and lower on a list of thirty.

It is clear that Ontario's own history of curriculum change may have created the situation where teachers hold onto their past practices as a means of survival. This is particularly true of the last twelve years during which time many new curriculum documents and a changed philosophy have emerged from the Ministry. It is also evident that teachers have had difficulty coping with the changes - particularly in the form of

curriculum guidelines. The situation demonstrates the need for a conceptual framework which would facilitate the critical examination of guidelines in order to determine their intents.

Need for Study

In spite of the efforts of the Ontario Ministry of Education to involve teachers and others in the development of curriculum guidelines issued by the Ministry, these documents are not being fully utilized in actual practice. (Peterborough Teachers' College Study, 1973; Reisman et al, 1974; Leithwood, et al, 1978). Comments by Storey (1977) and the findings of Leithwood and Wilson (1977) suggested teachers experience difficulty in translating guidelines into instructional programs. Where difficulties are encountered in the translation process, teachers tend to adhere to those practices and perceptions of a role historically assigned to them. Ryan and Cooper (1980), pointed out that teachers in the United States depend largely upon their own experience and perceptions in developing instructional programs in spite of the existence of guidelines. Young and Young (1977), in a study of curriculum activity preferences of Alberta teachers, found that classroom teachers preferred the task of "translating curriculum into instruction" over six other curriculum tasks dealing with curriculum development and implementation. Oberg (1978), in her discussion of findings from a study of British Columbia teachers, noted that "only three of the 46 subjects mentioned a need to have information about the school's philosophy or policies, and none made reference to societal level information", (p. 24-25).

In those situations where teachers and others are experiencing difficulty the guidelines may not necessarily be at fault. The problem may be immersed in the dissemination practices of those who generate the guidelines especially when no effort is made to aid the users of the documents in their understanding of them. Payne (1969) pointed out that conveyance of meaning is not a problem "if each member of a school staff could participate at every stage of the planning related to his work" (p. 6). However, where universal participation by all those involved in a system is impossible Payne (1969) suggested:

An independent, objective analysis should be useful feedback to the planning group (those responsible for planning the guidelines) and should provide direction for in-service education related to use of the document. (p. 6)

The value of this exercise is summed up by Payne (1969) in the following way:

The analysis of curriculum documents is not a starting point or an ending point, but a developmental step in planning. (p. 18)

In order to carry out an independent and objective analysis of curriculum guidelines for the purpose of illuminating the directives a set of criteria and procedures is needed. The criteria must be value free to the extent that they do not impose a particular set of values and rules. They must provide a framework for the evaluator to come to understand values and rules being conveyed by the guidelines. The problem addressed in this study is that no one document providing a set of criteria and procedures for the independent and objective evaluation of curriculum guidelines is available in the literature on curriculum.

Eraut, Goad and Smith (1975) noted a similar absence in the literature when attempting to identify criteria and procedures for the analysis of curriculum materials. They stated:

When, in the course of our project, we attempted to analyse various kinds of curriculum materials we often felt that we were mapping out new territory; and this was a constant surprise to us. (...) we expected to find considerable support in the literature. However whenever we looked for guidance, whether it was to philosophy, psychology, to curriculum theory, to sociology, or even to practical books on methodology of particular subjects, we seemed to find a large gap between what was written and what was needed for our analysis. We found plenty of theorizing about what ought to be done and plenty of practical advice on what to do: but there were no links between the two and there was little or no critical examination of the assumptions underlying practice. We had to conclude that, with a few notable exceptions, publications that might be appropriately labelled 'curriculum criticism' do not exist.

Ultimately, Eraut, et al, forged a link between some existing approaches to curriculum evaluation schemes aimed at materials designed for specific subject areas and the limited literature on curriculum criticism. The result was a more generalized and value-free approach to the analysis of such curriculum materials. (Similarities and differences between the Sussex Scheme of Eraut, et al, and that put forward in this present study are treated in the Discussion of Findings chapter of this thesis.)

The need and value for analysis schemes is made clear by Eraut, et al, (1975) as well as Fullan and Park (1981). Such schemes would serve the treatment of curriculum implementation as a topic of concern for pre-service teacher education, in-service teacher education, graduate education, those charged with generating new materials and those field workers who are charged with assisting teachers at the grass roots level in

systems where curriculum innovations and change proposals are disseminated through guidelines.

Purpose of the Study

The purpose of the present study was to generate a set of questions and procedures for conducting an independent and objective evaluation of curriculum guidelines. Such questions are needed to permit the users of guidelines to come to understand them more clearly so that planning of instructional programs may proceed in a way that is consistent with the intents of the documents. A further use for the questions and procedures would be to guide those persons given responsibility to generate and/or aid in the dissemination of guidelines.

Delimitation of the Study

Essentially, this study makes a connection between concepts of a curriculum theory and concepts related to content analysis to produce a set of questions and procedures for the evaluation of curriculum guidelines. Three basic ideas are therefore brought together. They are that a) curriculum theories are prescriptive, b) the function of curriculum theories is not unlike that of curriculum guidelines and c) the literature on content analysis and curriculum criticism provides guidance for the development of procedures in analysing curriculum guidelines. A fourth idea, used in the test of the questions and procedures, is that the guideline for the development of curriculum in the primary and junior school years in Ontario is a good example of such documents and is therefore valid for verifying whether or not the questions developed in the study cover all the essential aspects of a curriculum guideline. Arguments supporting the first three

ideas mentioned are presented through the definitions given to key terms used in the study as well as the content of the next chapter.

The study was therefore delimited by four assumptions.

- 1) that curriculum theories are prescriptive;
- 2) that curriculum theories and curriculum guidelines both deal with the phenomena of the development, use and evaluation of curricula;
- 3) that an independent and objective evaluation of curriculum guidelines can be carried out through a set of criteria and procedures generalized from literature on curriculum theory and content analysis.
- 4) that documents intended to guide the development, use and evaluation of curricula for the primary and junior divisions (grades kindergarten through six) in Ontario schools are a good example of a curriculum guideline* (This assumption is made, in spite of the fact that the guidelines are not getting as much attention as other sources used by teachers. The review of events outlining the processes contributing to the development of the guideline demonstrates care was taken in its development.)

Although the testing of the criteria and procedures was carried out by only one person in the study, informal testing of the criteria was carried out with practising teachers enrolled in curriculum courses at Queen's University. The tests proved to the satisfaction of the evaluator that the criteria and procedures were understood to mean the same thing by all.

* A good guideline is perceived as one that has derived the benefit of: having several authors, (of whom some have had previous guideline writing experience,) field testing of ideas and revision, and representation from those responsible for implementing the guideline at both the writing and field testing level.

Definitions of Key Terms

Most of the key terms have already been mentioned, but they now are defined in order to make the following overview of the study clear and succinct. They are curriculum theory, curriculum guideline, curriculum system, analytical model, content analysis, curriculum analysis, and curriculum evaluation.

Curriculum Theory - A Curriculum theory is defined as a group of related statements that give direction to the development, use and evaluation of a curriculum. (Beauchamp, 1975) Frequently, a curriculum theory is informed by other theories especially those related to learning, development and the structure of knowledge. It is an attempt to explain (or prescribe), through some logical progression of statements, those steps that ought to be taken in planning, using (implementing) and evaluating a curriculum.

Curriculum Guidelines - Curriculum guidelines are those documents generated within a curriculum system for the purpose of establishing a set of related principles and rules to be followed by persons working within the system as they generate, implement and evaluate curricula. The function of guidelines is to provide controls on the system in order to ensure that the policies and philosophy of the system are held constant throughout.

Curriculum System - A curriculum system is made up of levels of decision-makers. Each level is ascribed a particular set of decisions for which it is responsible. The actions of the decision-makers within a system are usually shaped by some common philosophy. Frequently the structure of a system is evident in a curriculum guideline.

Analytical Model - Two attributes make up an analytical model.

First an analytical model has questions which help to a) identify categories of statements and b) provide standards by which judgements are made about statements in documents under review. Second, the model outlines processes or procedures for applying the criteria.

Three other terms are defined using the terminology of Eraut, Goad and Smith (1975):

Content Analysis - A form of Intrinsic Evaluation which concentrates on the content of a programme with the intention of describing its salient characteristics, ascertaining its accuracy and revealing the underlying assumptions of the author. (p. 22)

Curriculum Analysis - The process of analysing curriculum data. The evidence may be either documentary or empirical and there are many different methods of analysis, whose usefulness depends both on the nature of the evidence and on the goal of the analysis. (p. 123)

Curriculum Evaluation - We have adopted Cooper's (1975) definition: 'Curriculum evaluation is the collection and provision of evidence on the basis of which decisions can be taken about the feasibility, effectiveness and educational value of curricula'. According to this definition the evaluator should stop short of passing final judgement through other authorities, notably Scriven (1967) think that the evaluator should "judge the worth" of a curriculum. (p. 124)

Overview of the Study

The following chapter is devoted to a review of literature on a) curriculum theory and b) content analysis. The chapter includes the presentation of an Analytical Model to be used in the independent and objective evaluation of curriculum guidelines. The questions and procedures making up the model are reflections of agreement found among principal writers on the topics of curriculum theory criteria and content analysis. The chapter concludes with a set of procedures used to test the model.

Chapter III is a presentation of the findings resulting from the test of the questions and procedures making up the Analytical Model. Statements appearing in the reviewed documents and having the attributes of a curriculum guideline (as described by the questions in the model) are summarized. Statements not identified as having one or more attributes of a guideline are also noted.

The fourth chapter, which presents a discussion of the findings, examines the results from the test of the model in light of the literature contributing to the content of the instrument. Secondly, the discussion demonstrates how the model generated through the present study differs from other curriculum analysis schemes. A third topic treated in the discussion deals with the contribution the Analytical Model may make to the work of curriculum guideline developers, curriculum workers and curriculum researchers. The discussion concludes with a treatment of possible future studies growing out of the findings presented in this thesis.

The fifth and final chapter is devoted to a summary of the thesis. Starting with the problem addressed by the study, various components of the report are summarized.

Chapter II

REVIEW OF LITERATURE AND PRESENTATION OF DESIGN

Introduction

As pointed out in the previous chapter, one of the basic assumptions delimiting this present study is the perceived similarity between the function of a curriculum theory and the function of a curriculum guideline. One of the purposes of this chapter is to present a review of literature on curriculum theory in order to identify the phenomena with which curriculum theory deals and more particularly to identify criteria for the expression of theories.

A second reason for the chapter is to offer findings from a review of literature dealing with content analysis as a research methodology. Conclusions drawn from the literature on content analysis along with generalizations drawn from the review of literature on curriculum theory form the bases for an analytical model. The model, presented at the end of the chapter, consists of proposed criteria (questions) and procedures required to carry out an analysis of curriculum guidelines. The results of a test of the model to a guideline are presented in the next chapter.

Four distinct groupings of writings were examined in order to accomplish the task of bringing together concepts of curriculum theory with concepts of curriculum analysis to produce a set of questions and procedures for the analysis of curriculum guidelines. The groupings were: a) literature on the expression of theories, b) literature on the phenomena to which curriculum theories might attend, c) literature on curriculum theory criteria and d) literature on content analysis as a research methodology.

From literature on the expression or writing down of theories (Appendix B) four characteristics of theories in general were identified. These stated characteristics were used as an aid to identify within the body of literature on curriculum as a field of study those writings that address the question: What should be the attributes of a stated curriculum theory?

One characteristic of theories in general (Appendix B) is that a stated theory should include definitions of key terms. This is necessary in order that the theorist communicate clearly to his readers the various concepts or ideas that he has brought together in a creative synthesis. Frequently, single terms are used to represent somewhat complex concepts. The direction and meaning of the theory would be unclear to the reader if the theorist failed to give clear definition to key terms.

A second desirable characteristic of theories in general (Appendix B) is that they should make clear the phenomena with which they are dealing. When the statements making up a theory fail to include an identification of phenomena about which inferences are made it is left vulnerable to questions based on events totally foreign to the intended concern of the theory.

The third concept identified from the literature on theory (Appendix B) is that theories should consist of a group of related statements that bring together concepts emerging from the phenomena examined. Known or observed generalizations about events within the phenomena are brought together in a new relationship by the theorist. The sentences that may in themselves form new relationships between concepts must present a logical or reasonable relationship to one another for one or more of the following ends. The statements may serve to a) bring a new explanation to events within the

phenomena being observed, b) predict relationships that may be observed repeatedly amongst events within the phenomena and/or c) prescribe events that should take place when a set of phenomena are treated in a particular way for a particular purpose.

The fourth characteristic of a stated theory generalized from the literature (Appendix B) is that a stated theory should be capable of generating hypotheses leading to its falsification. This notion does not preclude the possibility of theory verification. It suggests that theories may grow and change to encompass phenomena or events unforeseen in the first instance if, in the first instance, they are stated in such a way as to permit the generation of hypotheses that, once tested, may lead to the falsification of the theory.

As the literature on curriculum as a field of study and in particular literature on curriculum theory was examined these four characteristics were employed as a screen. Particular writings attending to the four generalizations within the context of expressing curriculum theories were sought. Four sources were identified as ones that offer criteria for curriculum theories that are congruent with the characteristics of theories in general (Herrick and Tyler, 1950; Johnson, 1965; Payne, 1969; Beauchamp, 1975). These four sources are treated in the section of this chapter subtitled, Curriculum Theory Criteria.

A necessary antecedent to an examination of literature on curriculum theory criteria was a review of literature on the complexity of the phenomena confounding the task of setting out criteria for curriculum theories. Curriculum, as a field of study, is marked by pluralism. One definition of pluralism is, "a theory or system that recognizes more than one ultimate

substance or principle" (Webster, 1973, p. 732). It was important then to identify sources that accommodated such pluralism in order to be congruent with the second characteristic of theories identified in the foregoing paragraphs. Findings from the review of the literature on the complexity of the field follows in the next section of this chapter subtitled, The Phenomena of Curriculum and Curriculum Theories.

The third section of the present chapter, subtitled, Content Analysis, presents concepts drawn from a review of literature on content analysis as it pertains to a research approach in the study of curriculum.

The fourth section of the chapter, The Analytical Model, as noted above brings together concepts from the literature on curriculum theory criteria and content analysis to produce an Analytical Model.

The next to last section of the chapter outlines the procedures used to test the model to a curriculum guideline. The findings of the test are presented in chapter III.

The chapter summary includes a discussion on how the Analytical Model developed in the study satisfies the four characteristics of theories in general. Furthermore, other curriculum analysis schemes to which the Analytical Model may be compared are identified. These schemes enter the discussion of findings in the fourth chapter where implications of the findings of the present study are presented.

The Phenomena of Curriculum and Curriculum Theories

Pluralism Amongst Definitions

In addressing the topic, curriculum theory, Macdonald (1971) wrote:

To begin with, one would suspect that theory would be focussed upon a clearly identified realm of phenomena. Unfortunately, this is not so in curriculum for the definitions of curriculum are as narrow as the subject matter to be learned and as broad as all the experiences students have in school. (p. 198)

A contributing factor to the scope of such definitions is the unclear boundaries between and among the various groups of phenomena contributing to the educational enterprise. Three such groups of phenomena are those connected with a) curriculum, b) instruction, c) teaching and learning.

Definitions of curriculum frequently include some of the phenomena associated with instruction, teaching and learning. Hosford (1973) examined the definitions of curriculum given by twelve authors and found them to make up four groupings: "Everything That Happens"; "Everything That Is Offered"; "The Planned What and How"; and "The Planned What" (p.17-18). The first grouping's definition includes phenomena associated with learning, teaching and instruction. The second grouping's definition includes phenomena associated with the teaching act and instruction. Events associated with the planning of instruction procedures are included in the third grouping's definition, and the fourth grouping's definition focusses primarily on the sequence of content to be presented. Without imposing strict definitions on the terms, instruction, teaching and learning, it is sufficient to say that all definitions of curriculum do not take into account the same phenomena and it is the task of the curriculum theorist to clearly define the term curriculum in the sense in which he is using it. Beauchamp, (1975) in addressing the issue of term definition, stated:

The definitional behaviour must answer such questions as: Is curriculum a concept unique to schooling? Does curriculum include instruction or teaching? To what extent are pupil learnings a part of curriculum? What is the total scope of curriculum as a field of study? (p. 77)

Answers to these questions lead to a definition of curriculum and more particularly the phenomena making up the results of a particular set of deliberations.

The resultant products of deliberations leading to a curriculum may include such things as: sets of behavioural or other kinds of objectives, prescribed content to be used as a vehicle for meeting such objectives, instructional plans and materials. The extent of the production (from a particular set of deliberations) should be consistent with the definition given to curriculum by the deliberators.

Pluralism Amongst Influences

To this point, phenomena which result from deliberation actions of curriculum planners have been examined. Another set of phenomena of interest to curriculum workers is that which influences the deliberation processes. Walker (1971) has identified two major spheres of influence on the deliberation processes: platform and design.

The concept of design put forward by Walker (1971) is not unlike that issued by Taba, (1962), Johnson, (1969), and Beauchamp, (1975). It is the conceptualized result of curriculum deliberation processes and is, therefore, closely tied to the definition of curriculum adhered to by any group of curriculum planners. As noted above, such definitions may be at variance to one another and as a result so can designs, but all designs are the result of deliberation processes.

The deliberation processes are guided by a platform. Walter (1971) gave the following definition to this term:

The word platform is meant to suggest both a political platform and something to stand on. The platform includes an idea of what is and a vision of what ought to be, and these guide the curriculum developer in determining what he should to realize his vision. (p. 56)

Components of the platform, as Walker (1971) saw them, are: conceptions, theories, aims, images and procedures. Conceptions are "beliefs about what exists and about what is possible" (p. 56). Theories are "beliefs about what relations hold between existing entities, that is beliefs about what is true" (p. 56). Aims are "beliefs about what is educationally desirable, that is beliefs about the good and the beautiful in education" (p. 56). Images "specify the desirable simply by indicating an entity or class of entities that is desirable without specifying why or in what way it is desirable" (p. 56). Procedures "specify courses of action or decisions that are desirable" (p. 56).

Walker (1971) rejected the notion that a curriculum model or theory in the classical sense can provide adequate guidance to the curriculum developer and suggested that teachers, the principal curriculum developers, do not proceed in ways fashioned by such models. (The model put forward by Tyler (1950) is frequently referred to as representing the classical tradition.) The classical model is prescriptive of what ought to be done by curriculum developers whereas Walker suggested curriculum research and theorizing should be descriptive and therefore proceed from what is done. An important question at this point is: Do models or theories of what ought to be done (the classical or prescriptive model) and the practice of what is done proceed from the same sources (the basis of descriptive models or

theories)?

Beauchamp (1975) reviewed literature on the sources of curriculum decisions and elaborated on seven clusters of sources. Within the clusters, beliefs, images, and procedures are generally visible. The first category identified is that of "adult survey and job analysis" (p. 77). Basic to this cluster are the beliefs that there should be some relationship between the school's program and the post-school life of its clients and the concept of the transfer of training.

The second group has to do with "man's accumulated culture" (p. 77). Three beliefs subsumed by this cluster are: curriculum content should be selected from the disciplines; there is a basic fund of subject matter that should be dealt with by the schools; and subject matters should be integrated.

"The student as a source" (p. 79) is the third cluster. A basic belief in this category is that the curriculum should provide ways and means for satisfying student needs. Three approaches to identifying student need are noted. They are: use of a needs assessment, examination of theories of child development, and direct consultation with the students.

"Culture, or society-centered sources" (p. 79) form the fourth cluster. One belief and one procedure are allied to this group. The belief is that the school is an agency of society in rearing children and youth. Since children and youth are members of society their needs and interests must be satisfied through the culture of the school. The process related to this grouping is one of recognizing emerging needs of learners while at the same time attending to bodies of culture content that are significant for development.

The fifth group of curriculum sources are those derived from "past experience in curriculum affairs" (p. 79). To this extent

history in curriculum making is important because it provides an "idea resource for those who make curriculum decisions either as curriculum content or processes" (p. 79). Frequently images of what ought to be or what ought to be done stem from a personal view of past events in curriculum.

The sixth, and perhaps most important group of curriculum sources, is "values" (p. 79). Values, as shall be elaborated upon later in this chapter, are frequently the beginning point for curriculum development. The curriculum developer may value certain concepts, theories, or even images of "what ought to be taught in the school" (p. 79) and proceeds to develop curricula from that particular standpoint.

"Social and political authority" (p. 79) makes up the seventh and final category of sources for curriculum decisions. As such, governments at various levels may from time to time legislate what should be taught in schools or suggest the criteria and processes for selecting the content of the curriculum or even suggest how certain content elements of the curriculum should be taught. The degree to which legislated directives are implemented is dependent upon the implementors' understanding and/or images of that which is legislated.

The clusters of sources which influence curriculum decisions identified above are general and act only as exemplars. It would be impossible to provide a detailed list of all possible influences on curriculum decision making and likewise it would be impossible to ascertain whether the influences were beliefs, or images of the developers without carefully interviewing the developers. Even the list of influences identified by Leithwood, et al., as reported in the first chapter of this study, lacks detail to the extent that the reader cannot be certain whether each influence, particularly those where self-reliance was involved, was

representative of concepts, theories or aims. Likewise the processes are not clear -- only the ends to which the influences contributed are noted. It is these sources or influences on curriculum decisions and the ways in which they play a role in the development, use and evaluation of curriculum that make up the phenomena or data to which curriculum theorists attend.

Pluralism Amongst Approaches to Theorizing

Just as the number of curriculum definitions and the number of identified curriculum sources contribute to the pluralism found in the field, the ways in which curriculum theories or models are derived extend the concept of pluralism further. Basic to the differences found amongst the various ways and means for curriculum theory development are the questions: Are curriculum theories derived inductively, deductively or in some other fashion? and Do curriculum theories prescribe the processes and materials to be used in curriculum development or do they explain the processes and materials selected for curriculum development?

The data or phenomena that theories of curriculum seek to summarize, describe or explain are the processes undertaken in relationship to other influences (both material and non-material) that lead to the production of a curriculum. Due to the variety of definitions of curriculum, the variety of descriptions of designs, and the number of phenomena that can influence and have influenced curriculum development activities, all tend to preclude the use of a singular approach to theorizing about these phenomena or data. Marx (1976) has isolated four primary modes of theory construction. These four modes, shown schematically in Figure 2, demonstrate possible relationships of theories to the data which they attempt to summarize, describe or explain. Marx (1976) explained:

(insert Figure 2 here)

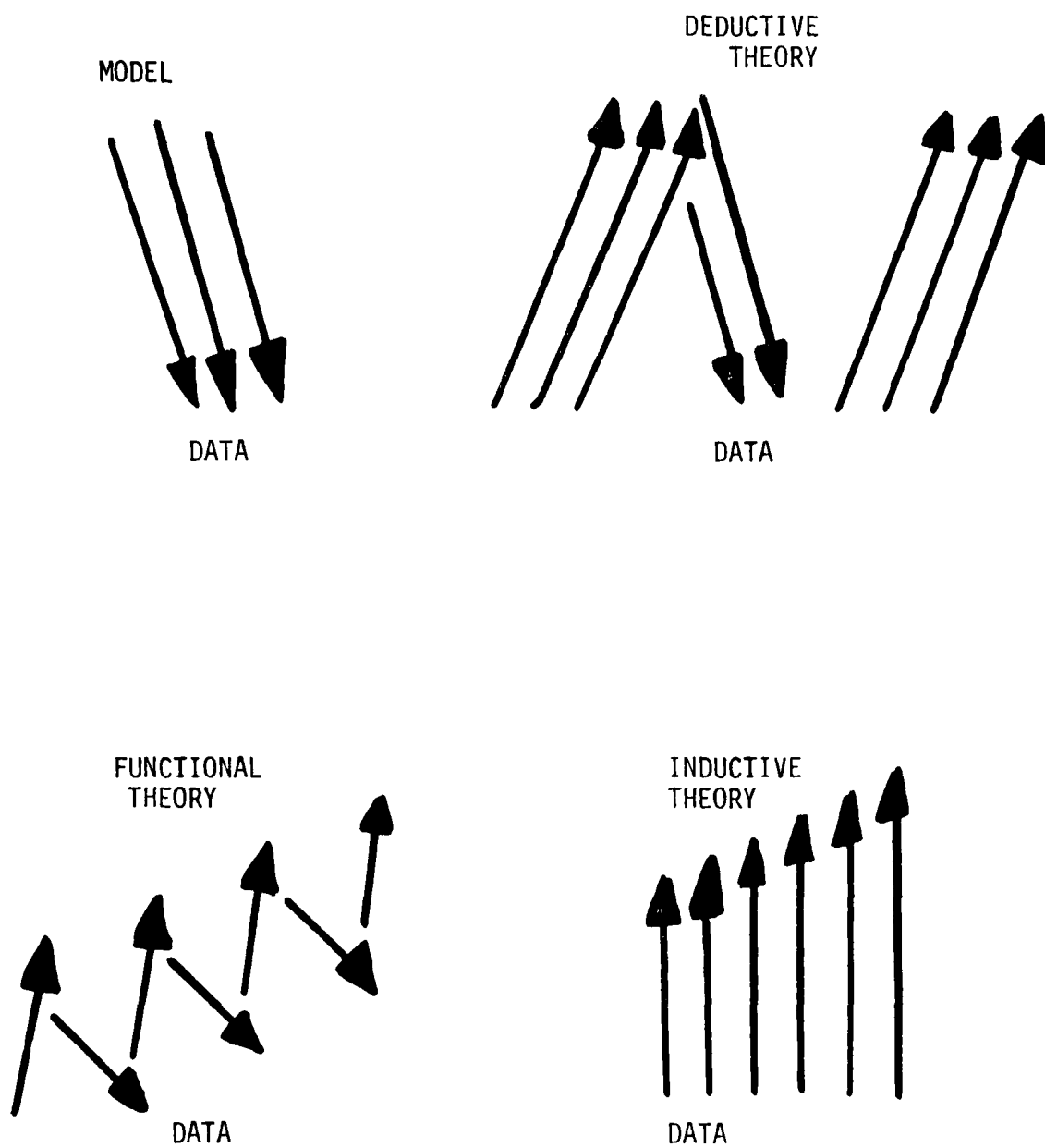


FIGURE 2

DIRECTION OF INTERACTION BETWEEN THEORY AND DATA IN FOUR MODELS
OF THEORY CONSTRUCTION

Straight vertical lines represent a relatively static, summarizing relationship between data and theory (characteristic of the inductive model). Slanted lines represent a more dynamic relationship, in which data, theory, or both play a more active role. The length of the lines represents the scope of the theory, that is, the extent to which it is removed from data. The horizontal dimension represents the passage of time. (p. 243 - 244)

No matter what the relationship of theories to the phenomena they explain, that is whether or not they are derived inductively, deductively, functionally or as models from other disciplines, all stated theories should look somewhat alike in form. Mathis and McGaghie (1974) defined theories as:

(...) systems of statements arranged in a hierarchical pattern according to rules of logic, that offer a structural framework for empirical investigation. (p. 31)

As such, a curriculum theory selected by a curriculum developer is being tested as the curriculum developer attempts to build a curriculum using the theory as a framework. When curriculum theory testing is examined in this light the question of whether or not curriculum theories can or should be explanatory or prescriptive dissipates. The question evaporates because the developer using a particular theory is in fact involving himself with the phenomena to which the theory is directed and in due course he will find out whether or not the theory accounts for the phenomena in an adequate way. He will also discover whether or not the theory accounts for all of the phenomena involved in the deliberations leading to the end results -- a curriculum. Differences between and among theories of curriculum are the starting points and processes involved in theorizing as well as the phenomena accounted for within the context of the statements making up the theory.

Theories and/or models of curriculum have emerged through all of the modes illustrated in Figure 2. It is difficult to perceive the model of theorizing used by a curriculum theorist from the theory statements themselves. The mode becomes evident only through arguments presented by the theorist and these arguments are usually external to the stated theory.

Models to Theories - The first illustration in Figure 2 shows oblique lines between a model and the data or phenomena. The one-way direction of the lines indicates that the model is not revised as a result of empirical testing of it. Furthermore, the lines are oblique indicating an indirect relationship between the model and the data. Such is the case because the model is oftentimes borrowed from other disciplines or statements of principle are borrowed from other disciplines and models are developed from them in a deductive manner.

Hill (1973) conducted a conceptual experiment in curriculum theory. In his study he sketched five idealized theories of knowledge and estimated how each might be expected to influence curriculum design. Essentially, Hill put forward five different verbal models for the development, use and evaluation of curriculum each based on a different theory of knowledge. The five theories of knowledge were: a) essentialist, b) positivist, c) sociological, d) existentialist, and e) formalist (p. 151 - 164). Each theory of knowledge was examined within the bounds of four assumptions:

1. Freedom to experiment.
2. All men by nature desire to know.
3. Prima facia, the way to learn is the way it was learnt in the first place.
4. Successful teaching may be gauged by getting the pupil to demonstrate what he knows (p. 152).

Nonetheless the verbal models or theories put forward by Hill (1973) are limited due to these assumptions. As he stated:

(...) the history of philosophy shows us that such accounts can never be purely descriptive because the investigation retains the taint of its starting points in some view of reality and human nature (p. 151)

Deductive Theories - It is difficult to distinguish between models as theories and theories developed through the deductive pattern illustrated by Marx when the theorists who proceed deductively do not make clear the sources of their starting points. For example, Tyler (1950) developed his rationale from four basic questions:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained. (p. 1-2).

His model then proceeds in a somewhat deductive manner from these questions. The sources of Tyler's questions are not entirely clear and the reader is left to speculate that it was Tyler's observation of the phenomena of curriculum that gave rise to the questions and the subsequent deduction that curriculum building should commence from studies of the learners, studies of life outside the schools, and input from subject specialists.

Bruner, (1966) on the other hand, proceeded deductively from theories about child growth and learning. Since these theories were

attempts to explain relationships amongst some of the phenomena associated with curriculum, the pattern is quite clearly deductive in that Bruner's theory of instruction was deduced from principles or theories explaining some of the data toward which the new theory was directed.

Initially, there was no attempt by either Tyler or Bruner to test and modify their theories. Refinement of the theories has been left to subsequent studies which have tested the theories through praxis, criticism of the deductions that gave rise to their existence, or criticism of the starting points for the theory development. Most frequently, theory testing has focussed on criticism of the starting points. Walker (1971) and Pinar (1975) were both critical of Tyler's starting points but neither produced a refinement of the Tyler rationale. Instead, Walker (1971) suggested an alternative model for theorizing and Pinar (1975) suggested alternative categories of curriculum phenomena as starting points. Goodlad, (1966) on the other hand, did produce a refinement to the Tyler rationale as a result of praxis. He stated:

The present report is an attempt to use some of Tyler's concepts, refine others, and add several of our own in attempting to advance the faint but continuing dialogue about curriculum as a field of study. (p.1)

Similarly, the work of Taba, (1962) Saylor and Alexander, (1974), and Smith, Stanley and Shores (1957) all reflect refinements of the Tyler rationale. These refinements are the result of combined praxis and criticisms of deductions made from the starting points identified by Tyler.

Pinar (1975) conceptualized the contemporary curriculum field as being "characterized by the pragmatic, by the concrete everchanging tasks

of curriculum development, design, and evaluation", (p. xi). He suggested that the main bulk of what has been done was to help those who work in schools and as a result has been somewhat "atheoretical" (p. xi). Theorizing per se, at this level, tends to be much more functional and as such "is not only closer to the data, and therefore much more readily modified, but also of considerably less scope than the typical deductive theory", (Marx, 1976, p. 247). Although Pinar included Tyler and others of the same "genre" in this group it is argued here that Tyler, and those who have refined his work, have participated in the deductive processes of theory development and they have directed their work to legitimate data or phenomena.

Functional Theories - The kind of work that does fall within the description of functional theory development would be the typical "how to" handbooks for curriculum development, curriculum improvement, curriculum change, or curriculum implementation. Such writings do not necessarily attempt to put forward comprehensive curriculum theories that guide decision-making at all levels. Instead, they convey ways and means for responding to a variety of curriculum problems and often these suggestions are principles borrowed from a variety of sources or theories. Their intent is to improve various aspects of curriculum practice through suggestions based on, or generalized from, experiences in the practice of curriculum. The work of Neagley and Evans, (1967), Inlow (1973), and Oliver (1977) are exemplars of this level of theorizing.

A major difference between theories that are evolved deductively and those that are evolved inductively is that deductive theories start with hypothesized general conclusions as premises to particular instances whereas inductive theories start with individual instances and move to

general conclusions. Simply put, the curriculum theorist who proceeds deductively theorizes about the phenomena of curriculum from selected premises whereas the curriculum theorist who proceeds inductively theorizes about the phenomena of curriculum from the phenomena themselves. Therefore, as shown in Figure 2, there is a straight-line relationship between the phenomena and the theory in the case of inductive theories.

Schwab, (1969) in criticizing models and deductive approaches to explaining the phenomena of curriculum, stated:

The inadequacies of principles begin to show, in the case of theoretical inquiries, by failures of the subject matter to respond to the questions put to it, by incoherencies and contradictions in data and in conclusions which cannot be resolved, or by clear disparities between the knowledge yielded by the enquiries and the behaviours of the subject matter which the knowledge purports to represent. (p. 3)

In the case of the more functional approach to curriculum theorizing Schwab (1969) offered the following criticism:

In the case of practical enquiries, inadequacies begin to show by incapacity to arrive at solutions to the problems, by inability to realize solutions proposed, by mutual frustrations and cancellings out as solutions are put into effect. (p. 3)

The basis of Schwab's arguments against these forms of theorizing is that they do not adequately account for all of the data or phenomena about curriculum. Especially in the case of models and deductive theories, the starting points are confined views of the subject thereby limiting the object or the phenomena addressed by the theories to that phenomena which is bounded by the subject definitions.

Inductive Theories - Both Schwab (1969) and Walker (1971) indicated a more inductive approach to the development of curriculum principles and

laws is needed in order to accommodate, if not all, at least as much of the phenomena of curriculum as is known. The phenomena to be considered would include the "deliberations" (Walker, 1971, p. 52 - 53) of curriculum planners as observed by the researcher. By way of analogy, Schwab (1969) suggested such principles and laws of curriculum could evolve in much the same way as do statutes and laws in the legal sense, (p. 14). The process for theorizing from data to the theory level would be long and arduous yet it would consist of a deliberate application of "the practical arts" (Schwab, 1969, p. 14) which permit the researcher to critically examine the effects of any one facet of change on the whole as one proceeds to a better understanding of the whole (all of the phenomena of curriculum development, use and evaluation.).

Evidence has been presented to this point that pluralism exists in the definitions of curriculum, definitions of curriculum designs, concepts of the phenomena attended to by curriculum theorists and approaches to curriculum theorizing. It is argued that any analytical model permitting a researcher to critically examine any set of curriculum materials, in order to determine the curriculum theory implicit and explicit in them, must accommodate this pluralism. Any set of criteria limited to a singular definition of curriculum, curriculum design, concept of curriculum phenomena, or approach to curriculum theorizing would render it vulnerable to attack on the basis of its narrowness. Such criteria may cause an analyst to reject certain statements, as not contributing to a theory, when in fact he should not.

Pluralism in Metatheory

Evidence of pluralism is found in the area of metatheory as well. Commenting on the variety and quality of curriculum theorizing activities,

Schwab (1969) stated:

The models, the metatheory and the metameta-theory are the place. Many of them, moreover are irresponsible - concerned less with the barriers to continued productivity in the field of curriculum than with exploitation of the exotic and the fashionable among forms and models of theory and metatheory: systems theory, symbolic logic, language analysis. (p. 6)

Furthermore, Schwab (1969) is critical of the more responsible metatheories for not attending to the basic issues of "reasoned construction or reconstruction of curriculums" (p. 6)

Schwab's criticisms of metatheory in curriculum are particularly valid when narrow methodologies for curriculum theorizing are elevated to the level of metatheory. As Snow (1973) pointed out:

Often methodologies attain the status of metatheory. They prescribe the form that theories based on that metatheory or methodology can take and constrict the researcher's modes of thought, explicitly and perhaps also unconsciously, (p. 79)

Marx, (1976) in presenting his four modes for theory construction, called for a broad base when he said, "(...) there is plenty of room for each of these procedures and there is greater likelihood of eventual scientific advance if all are used." (p. 243-244)

Curriculum Theory Criteria

This section of the present chapter focusses on five curriculum theory criteria that are not restrictive, account for the pluralism, yet direct the theorist to attend to phenomena of curriculum development, use and evaluation. The purpose in isolating such criteria was to make use of their metatheoretical tool value by employing them in the development of an Analytical Model for the assessment of curriculum guidelines. The tool value of such criteria was noted by Snow: (1973)

A metatheory is a theory concerned with the development, investigation or description of a theory itself. It specifies the rules with which a theory is constructed and written down. (p. 79)

Similarly Grumet (1975) wrote the following of metatheory:

(...) its ambition is to reveal the implicit presuppositions that the theorist extends into the styles of inquiry, explanation and imagination that he elects. (p. 1)

As stated previously, the purpose of this study was to determine the questions and procedures necessary for the evaluation of a curriculum guideline in order to bring to light its directives for users. Of necessity, because of the various modes of theorizing that curriculum workers have used, the criteria employed had to permit the use of any mode of theorizing and had to focus primarily on the stated theory.

Two of the four generalizations dealing with the expression theories in general (introduced at the beginning of this chapter) have been used in an organizing format for the balance of this section. The various sub-headings represent a consensation of the criteria identified in the literature. The first subheading, Defining Terms indicates a relationship of the content that follows to the first generalization about theories in general. The next four subheadings, Stating Values, Outlining the Design, Curriculum Processes, and Evaluating Curriculum Decisions, treat the phenomena and concepts with which curriculum theories should deal. Therefore, the content in these parts of the chapter focusses on the concerns identified in the second of the generalizations outlined in the introduction of this chapter. The third and fourth identified characteristics of theory in general direct the remaining major sub-sections of this chapter entitled Content Analysis, and Testing the Analytical Model.

Earlier, four sources were identified as contributing to the identification of curriculum theory criteria. They are: Herrick and Tyler (1950), Johnson (1967), Payne (1969) and Beauchamp (1975). Following is a demonstration of their treatment of the topic. The next five sections of this chapter examines their treatment of curriculum theory attributes.

Defining Terms

The first criterion offered by Beauchamp (1975) was, "Any curriculum theory should begin by defining its set of events" (p. 82). Elaborating on the term "events", Beauchamp (1975) stated:

Within each of the identified series of events, there are technical terms that define the subject matter of the theoretical field. (p. 58)

Simply stated, Beauchamp called for curriculum theorists to carefully define all key terms used in the theories which they present.

Johnson (1967) addressed this issue as "one of the chief problems in curriculum theory" (p. 128) and argued for clear definitions of such terms as: curriculum, instruction, structure, and selection criteria.

Similarly, Tyler and Herrick (1950) noted:

As a further effort (...) in the development of a more adequate theory, someone might spend time trying to describe the nature of such theory, its tasks, its subject matter, its test, and its uses. (p. 121)

Payne (1969) suggested "the criterion of clarity, however, is primary" (p. 13). Further to this she added:

The most common problem is the lack of definition and consistent use of key terms pertaining to the learning process and to educational objectives. (p. 13)

In brief, stated curriculum theories should include definitions of key terms.

Stating Values

Beauchamp's second criterion is "Any curriculum theory should make clear its accepted values and sources for making decisions" (p.82). This criterion requires curriculum theorists to "identify what values they are going to use for themselves as rule-governing behaviour, or criteria, in making curriculum decisions" (p.79). Sources go hand-in-hand with values for in a sense they demonstrate the theorist's value position or starting point for theory building. Beauchamp (1975) identified: the results of adult surveys and job analysis, recognized disciplines, the results of needs assessments, cultural and societal needs, past experiences in curriculum, and social and political authority as possible sources of starting points for curriculum theorizing and subsequently curriculum development (p.79).

Johnson (1967), too, called for the theorist to be clear in his identification of such values and sources. He wrote, "What is of concern, however, is that whatever criteria are used be made explicit" (p.132). Johnson (1967) established the function of such criteria in the following statement:

Various criteria may govern the selection of curriculum from available content. Ideology determines what additional criteria are imposed in curriculum selection. (p.137)

Herrick and Tyler (1950) also recognized the function of values in theory building. They stated:

(...) one of the most important decisions in formulating a good curriculum theory is the one regarding the basic orientation of that theory. (p.121)

In extending this concept, Herrick and Tyler (1950) wrote:

It would be especially helpful if the points where value judgments operate were honestly recognized and critically discussed in the writings on curriculum theory. (p. 123)

Five questions taken from Payne (1969) reflect her point of view on the role of values in making curriculum decisions:

1. Is there a statement of goals? (p. 8)
2. Is justification given for the choice of goals? (i.e., philosophy, beliefs, or empirical evidence) (p. 9)
3. Is there a statement of belief about learning or the learning environment or about the practice of instruction intended to apply to all phases of the program? (p. 8)
4. Are there any explicit statements about the nature of learning and the conditions under which it occurs? (e.g., statements about motivation, learning environment, maturation and capacity, cognitive processes). (p. 11)
5. Are there any specific views on the structure of the subject matter? (p. 11)

In summary, a stated curriculum theory should include values positions serving as starting points for the theory.

Outlining the Design

"Any curriculum theory should specify the characteristics of curriculum design" (p. 82), is Beauchamp's (1975) third criterion. The term design is used in the noun sense in this context and as such refers to the organizational characteristics of the curriculum substances to be presented to learners.

Johnson (1967) addressed this issue in a somewhat more restrictive manner than Beauchamp. He suggested "structure is an essential characteristic of curriculum" (p. 138) and "curriculum structure reveals orderings that are mandatory for instruction" (p. 138). Johnson (1967) also

suggested that structure reveals hierarchical relationships. His tendency to be more restrictive is a result of his blending, on occasion, of curriculum theory criteria with curriculum theory statements.

In Herrick and Tyler's (1950) work, the following two statements are found regarding this third criterion:

(...) a satisfactory theory (...) should outline the nature of an organizing scheme that can achieve an efficient, cumulative effect in curriculum learning (...) (p.67)

and

(...) theory should explain what is required for effective sequence (vertical organization) and effective integration (horizontal organization) and why. (p.44)

On the topic of organization of the curriculum, Payne (1969) asked the following questions:

1. What is the plan of curriculum organization in terms of major divisions, departments, courses, grades, etc.? Are there any descriptions of courses or of the various divisions of the curriculum? (p.8)
2. Is there any explanation of why the general plan of organization was developed as it was? What was the basis for the division and the sequence of curriculum areas? (p.9)
3. Does the plan provide the outline for organization and sequence of the course or curriculum area? (p.11)

4. How specific is the treatment of subject matter? (unit topics, daily topics, specific examples, etc.) (p. 11)
5. Is there a statement of objectives or desired results of instruction? To what degree of specificity have these been developed? (course, units, or activity) (p. 11)

Collectively, the four sources suggest that a curriculum of theory should include statements describing the organizational characteristics of a curriculum.

Curriculum Processes

Fourth in Beauchamp's list of criteria is, "Any curriculum theory should describe the essential processes for making curriculum decisions and the interrelationships among those processes" (p. 82). In the third criterion Beauchamp used the term "design" in reference to the organization of the curriculum whereas he uses the term "designing" (p. 196) to describe the processes involved in curriculum development. More specifically he identifies "selection and organization" (p. 78) as processes in curriculum planning. At issue and related to this criterion is "who will be involved in curriculum planning" (p. 81). Furthermore, since curriculum theory is not necessarily confined to curriculum development events, and may in fact include the events of use and evaluation, all processes of the phenomena to which a theory directs itself should be described in the theory. This last point is implicit when the first and fourth criteria are considered collectively.

On the criterion of process identification, Johnson (1967) is not as open-ended as Beauchamp. He focussed on "selection" (p. 137) as being the main process, if not the only process, and he did not include who should be involved in this process because he deemed this notion "not a concern of curriculum theory" (p. 132).

Like Beauchamp, (1975) Herrick and Tyler (1950) were open-ended about what the processes might be and who might be involved. They wrote:

(...) the task of curriculum theory is not the question of either the grassroots approach or the mountain-top attack but that any program must have both proceeding through proper communication and interaction to evolve and creatively project more adequate curriculum theory. (p. 120)

Further to this point they stated:

Curriculum designs must provide staffs and individual teachers with an understanding of their role and responsibilities in making major decisions of curriculum development. (p. 49)

Again, Payne (1969) directed several questions to the topic at hand. Related to decision-making processes she asked:

1. What should the approval process be in terms of types of decisions, documents, and the like? What should appear in formally approved documents? (p. 15)
2. Should formal plans be based on specific points of view about learning or instruction? If so, does this necessitate the assumption that everyone who participates in the development and implementation of plans must agree or conform to this belief? (p. 16)
3. Should formal planning be based on the assumption that the planners, if judiciously selected, will make rational decisions and therefore need not justify their decisions? (p. 16)
4. What is the purpose of formal planning in the institution? Is it to tell the teacher how to do his job or simply to outline his broad responsibilities? Is it to co-ordinate and control the total program? Is it to provide support and help for teachers? (p. 15)
5. Of the various types of curriculum decisions (goals, objectives, activities, materials), which should be mandatory and which optional for the teachers? For example, should each individual teacher have the option of selecting the objectives for instruction? (p. 15)

6. Are the various types of decisions in the documents presented as directives or as suggestions? (p. 9)
7. If they are in the form of suggestions, are options given? (p. 9)
8. If options are given, is there any indication as to the circumstances in which a particular option is preferable? (p. 9)
9. Does the plan give any specific activities or methods for teachers? What is the general emphasis in types of activities? (p. 11)
10. Does the plan include specific activities for students? If so, are the activities described in sufficient detail to suggest what the student is actually to do and the related cognitive process? What is the general emphasis in types of activities described? (p. 11)
11. Does the plan specify the materials to be used in instruction? Are these descriptions of what is to be done with the materials?

In conclusion, a curriculum theory should include sentences describing the process by which a curriculum should be generated.

Evaluating Curriculum Decisions

The fifth and last criterion given by Beauchamp (1975) is, "Any curriculum theory should provide for continuous regeneration of curriculum decisions" (p. 82). To Beauchamp, curriculum decisions are made within the context of a curriculum system and the decisions made become a part of that system for they become points of departure in developing instructional strategies. Beauchamp (1975) suggested that feedback from evaluation of the system must be available to "rejuvenate the system's parts" (p. 172). Besides evaluation of the system, as an aid in regenerating curriculum decisions, Beauchamp (1975) suggested three other sources of information to consult in this process: 1) evaluations of teacher use of the curriculum, 2) evaluations of the design, and 3) evaluations of pupil outcomes (p. 170). The criteria for such evaluations would come from the theory upon which the curriculum and curriculum system is built. In particular, the criteria

would be based on the accepted values and sources made explicit in the theory.

Johnson, (1967) again, was more prescriptive in his criterion statements regarding curriculum evaluation. He wrote:

Curriculum evaluation involves validation of both selection and structure. Empirical evidence based on instruction can identify structural errors and omissions in selection. Judgmental and consensual methods are required to validate priorities and identify superfluities in selection. (p. 139)

Herrick and Tyler, (1950) on the other hand, were even more general than Beauchamp. Treating curriculum theory statements as hypotheses, they explained that "experience can supply data for the evaluation and improvement of such hypotheses" (p. 124).

On the topic of evaluation, Payne (1969) raised these questions to guide an evaluator of curriculum documents:

1. Are the criteria for selecting and organizing subject matter and materials given? (p. 11)
2. Is there an explanation of the decisions about evaluation, either in point of view or in defence of the choice of procedures? (p. 9)
3. Is there a general plan for evaluation of students? (e.g., an examination system, a standardized testing plan, or other procedures applying to all students). (p. 9)
4. What are the suggested purposes for evaluating students? What evaluation methods are recommended? Are the specific procedures given? Is there a proposed schedule for evaluation? What suggestions are provided for the analysis and the use of the results of evaluation? (p. 11)

In conclusion, statements making up a curriculum theory should direct the assessment of decisions made in producing a curriculum.

Reasons for Differences

Although all of the authors, Herrick and Tyler, (1950) Johnson (1967), and Beauchamp (1968, 1975), and Payne (1969), addressed all five of the critical issues discussed, differences between and among them, although slight, are evident. Differences stem from differing orientations to the task. Herrick and Tyler, writing in 1950, were at the point of

initiating discussions about curriculum theory criteria with the result that those identified were tentative in nature. Johnson (1967) first grappled with the problem of pluralism in the field by identifying curriculum phenomena as distinct from instruction phenomena and then generating his criteria from a value position as to what he thought curriculum was. The result was an intermingling of curriculum theory criteria statements with curriculum theory statements or, in other words, a mix of metatheory and theory statements. Payne (1969) attempted to identify criteria for the evaluation of curriculum documents and in so doing tried not to impose a personal value position upon the criteria. Beauchamp's (1975) work, the most recent of the four, accommodated the pluralism found in the various writings on curriculum phenomena, curriculum theorizing, and curriculum metatheory. As a result, he kept his curriculum theory criteria discrete from any one theory and was able to present a more general yet comprehensive set of criteria to guide curriculum theory development and curriculum theory evaluation.

Studies Focussing on One or a Few Criteria

Herrick and Tyler, (1950) Beauchamp (1975), Johnson (1967), and Payne (1969) are not the only curriculum writers who have addressed the question of curriculum metatheory. Frequently, the work of other writers focus on one or a few of the common areas of concern identified above and not all. This fact does not mean basic disagreement with the notion that five such common places of theory do and should exist; it simply indicates that writers frequently address issues related to only one or a few of the criteria. Conran and Beauchamp, (1975) for example, focus on the possible role of mathematical models as "an aid to curriculum theory building" (p. 392) and in so doing rely primarily on the third, fourth and fifth criteria

mentioned above while dealing with one possible approach to satisfying the second criteria. Similarly, Ryans (1965), in generating a model of instruction based on information systems concepts, treated four of the five criteria in the rationale section of his paper. Broudy, (1965) in outlining "Components of a Theory of the Curriculum", carefully examined the relationship of sources to the design, and criteria and processes for selecting and sequencing content. In so doing he touched on the first, second and third criteria outlined above while the criterion calling for the definition of key terms and the criterion calling for evaluation procedures are not dealt with explicitly. Broudy's theme, however, was one of internal consistency of theory expression thereby dealing in an implicit way with the fifth criterion of those listed.

The one criterion that gets a great deal of attention in the literature on curriculum theory is the second in the list. Differing positions on the values and sources that one must consider in developing a curriculum theory, and thus a curriculum, have led to the production of numerous curriculum theories and criticisms of them. In a sense, this second criterion is a keystone in the building of a curriculum theory for differences in the starting points (value positions) among theorists produce different terms to be defined, different procedures to be followed for the development of the theories and subsequent curricula, different designs, and different criteria for evaluation of the various curricula.

Tyler (1969) identified four commonplaces of curriculum to which various theorists attend:

1. Who has the authority and responsibility for making decisions about the ends and means of schooling?
2. What are the ends-means of schooling?

3. What kind of information is used for the basis of making decisions?

4. How can decisions about ends and means be made?

Of these four commonplaces, the third is most closely aligned with the values and sources notion and as a result should be reflected in the responses to the other three questions which she poses. Macdonald, Wolfson and Zaret (1973) were critical of the information base proposed by Tyler (1950) for curriculum decision making and proposed a broader substitute. When the other three questions are directed to the Macdonald, Wolfson and Zaret (1973) article, they yield different responses than when applied to the work of Tyler (1950). Just as different starting points (value positions) in curriculum theorizing produce different responses to the questions posed by Tyler (1969), different starting points will produce differences among theories when the five criteria previously listed are applied to them in the form of questions. Furthermore, variations in starting points produce differences between and among the theorizing modes used to produce the theories.

Five Criteria for Curriculum Theories

Like Snow (1973), Beauchamp (1978) recognized the existence of different starting points for curriculum theorizing. He explained that when both speculative theorists and scientific theorists address the set of events called curriculum the approach used by each may yield a product different from the other. Beauchamp (1978) wrote:

In an applied field like education or curriculum as one dimension of education, speculative theory can carry us only so far. The moment one posits hypotheses to be tested and intends to test them empirically, he or she must move to the scientific processes in theory building. (p. 407)

Differences between and among various products of curriculum theorizing can be found through directing the same questions to these products. These questions should be generated from a set of criteria for curriculum theories. Five basic criteria for theories of curriculum and/or curriculum guidelines that can now be generalized from a review of literature on curriculum theory are:

1. A curriculum theory should make clear the value positions and sources upon which a curriculum should be built.
2. A curriculum theory should specify characteristics of a curriculum design.
3. A curriculum theory should describe essential processes for making curriculum decisions and the interrelationships among those processes.
4. A curriculum theory should provide guidelines for continuous evaluation of curriculum decisions.
5. A curriculum theory should include definitions of its key terms.

These five criteria, common to Herrick and Tyler (1950), Johnson (1967), Beauchamp (1975, and Payne (1969), take into account both the pluralism found amongst definitions of the phenomena addressed by various curriculum theorizing. The five criteria and the supporting literature for them can form the basis for questions to be asked of curriculum documents in order to carry out an analysis of them. Such questions are presented in the second last section of this chapter entitled The Analytical Model.

As stated in Chapter 1, an appropriate analytical model for the analysis of curriculum documents (such as those whose intent it is to express a curriculum theory or set of curriculum guidelines) should include both questions and procedures. The procedures for analysis of such

documents are outlined on page 72 of this chapter. They are guided by the literature reviewed in the next section.

Content Analysis

Need for Criteria

The notion of stepping outside of the phenomena under study and looking back at it through an analytical model is not entirely new. Frye (1957) noted that such has been the case of the pure sciences and he suggested that the same should occur in the field of literary criticism. He stated:

It occurs to me that literary criticism is now in such a state of naive induction as we find a primitive science. Its materials, the masterpieces of literature, are not yet regarded as phenomena to be explained in terms of a conceptual framework which criticism alone possesses. They are still regarded as somehow constituting the framework or structure of criticism as well. I suggest that it is time for criticism to leap to a new ground from which it can discover what the organizing or constraining forms of its conceptual framework are. (p. 15)

Gagné (1978) stated that "the functions served by content are determined in critical ways by factors external to the content itself" (p. 8). It is important, therefore, to generate criteria for examining content without distorting it. In the case of curriculum theory or curriculum guidelines it is important to determine those generalizations that tend to inform the writers of such materials as to what the various content categories ought to be.

Beauchamp (1978) said, "We are really in a naive state in theory development" (p. 409). His statement is prompted by his observation that theory development is proceeding in at least two different directions or from two different starting points. In spite of the pluralism found in the approaches to theorizing and in the definitions of the phenomena of curriculum, there is agreement among curriculum writers about

the nature of the end or written product of such theorizing endeavors as summarized through the five criteria presented earlier in this thesis. The notion of using such criteria as the nucleus for a conceptual framework to criticize the written products of curriculum theorizing endeavors is akin to Frye's (1957) concept of an approach to literary criticism. It allows the critic to step outside the bounds of any one curriculum theory and to look at the theory statements of any theorizing endeavor in a critical way. The fact that the criteria are derived from a generalized view of curriculum theorizing and theorizing products brings integrity to the process.

Kelly (1975) suggested that "concepts borrowed from literary criticism may enable evaluators to describe and judge curricula without distortion or oversimplification" (p. 103). Crucial to this process is the validity of the norms or criteria being applied to the materials being evaluated. Such criteria or norms guide the judgements being made by the evaluator. Taylor (1961) summarized the notions put forward in these last two statements the following way:

Every process of evaluation and every value judgement contextually implies that the norms being used are appropriate and valid (p. 104).

Although each approach to curriculum theorizing may have its own norms to examine the various efforts at theorizing, a metatheory for curriculum theorizing in general should account for pluralism amongst approaches. Willis (1975) commented:

(...) clearly the field needs to develop a pluralism of critical approaches to the curriculum and a metatheory which permits and makes rational this kind of pluralism. (p. 9)

The five criteria previously outlined accommodate such pluralism and they do have the validity called for by Taylor (1961). The pluralism is accommodated through the fact that they do not impose any one mode for theorizing while the validity is accommodated through the demonstration that there is agreement among experts in the field as to what these criteria should be.

Applying Criteria

Content analysis is essentially a two-step process. Gibbons (1977), Freeman (1978), and Hopkins (1980) pointed out that the first step is to conduct a broad analysis of the document under review in order to identify various words or statements falling into previously established categories. The second step is to make some judgements about the statements or words on the basis of predetermined criteria.

Within the context of the broad analysis step, categories of words or statements identified become "meaningful subsets which will serve as the units of observation" (Freeman, 1975, p. 22) in the second step. Identification of the particular groups of words or sentences making up the various categories is aided by a taxonomy. Freeman (1978), suggested:

The investigator must select or develop a taxonomy which describes meaningful content categories. (p. 23)

Gibbons (1977) and Posner (1978) both suggested the use of a system whereby the network generated by meaningful connections among the various categories of statements can be identified and examined. Porter, et al (1978) generated a matrix from a taxonomy for the purpose of both identifying categories of statements and observing meaningful connections amongst the units. This approach was used in the study at hand and is demonstrated in the last section of this chapter. (The taxonomy used is made up of the five criteria

for curriculum theories previously outlined.) The fifth question (criterion) dealing with definitions of key terms is superimposed on all responses to the first four (criteria) questions.

The second step in content analysis where judgements are made about statements gathered through the broad analysis requires care and precision, McNally (1978) referred to two other writers on the topic in order to clarify the process involved. She stated:

Holsti (1969) defines the technique as any technique for making inferences by objectively and systematically identifying specified characteristics of messages (p. 14). Carney (1972) expands the definition when he contends that, 'Content analysis is a way of asking a fixed set of questions unfalteringly of all of a predetermined body of writing in such a way as to produce countable results'. (p. 6)

Besides yielding countable results the technique described above "can help identify a concept in relation to others, or show how a concept (or element of the concept class) is manipulated" (Gibbons, 1977, p. 18).

Identification of relationships is facilitated when a matrix is employed. The nature of a matrix permits the cross-referencing of statements and detailed definitions of sub-categories of words or statements garnered through the broad analysis step. Questions generated through two dimensions of a matrix act as criteria or norms for making judgements about the content being reviewed.

In the application of criteria or norms to curriculum theorizing products as a form of content analysis, distortion and oversimplification must be avoided. An example of such distortion would be the oversimplification of the meaning of statements in order to identify them as meeting one criterion or another. Such distortion could be avoided through what Mann (1969)

called "personal knowledge" (p. 38). The critic must have personal knowledge of both the criteria being applied and the material to which it is being applied. Personal knowledge, then, makes the judgements of the critic or evaluator more objective.

During the process of content analysis the critic must make judgements about certain statements as reflecting an adherence to selected norms and effectively express such judgements. Kelly (1975) listed three criteria for the expression of such judgements:

- (1) a statement of the judgment or verdict
- (2) a statement of the reason or reasons for the judgment, and (3) a statement of the norm or set of norms that shows the reasons to be good ones. (p. 101)

The Analytical Model

Generating Criteria

Five questions, each reflecting a different criterion for a curriculum theory, form the basis of a matrix. Supplemental statements, based on other findings from the review of literature on curriculum theory, bring further refinement to the two axes of the matrix. Consideration of intersecting concepts in each cell of the matrix produce even more refined criteria (sub-questions) for judgement of statements drawn from documents reviewed.

Statements selected from curriculum documents and reflecting a clear response to any one question would demonstrate a "judgment or verdict" (Kelly, 1975, p. 101) on the part of the reviewer. If such statements are judged to meet a particular criterion, in light of the two dimensions contributing to it, the "reason or reasons" (Kelly, 1975, p. 101) for selecting the statements are the obvious. If the criterion are based on a review of expert opinion, they do set "norms" (Kelly, 1975, p. 101) by virtue of the agreement among the experts.

Questions and Procedures of the Analytical Model

As stated in the first chapter of this thesis, the purpose of the study was to generate a set of questions and procedures for conducting an independent and objective evaluation of curriculum guidelines. The study moved through two phases. The first phase focussed on the generation of criteria and procedures for evaluating curriculum guidelines from a review of literature on curriculum theory and content analysis. The criteria and procedures that represent conclusions from the literature review make up the attributes of an Analytical Model. The second phase of the study consisted of a testing of the Analytical Model on a curriculum guideline assumed to be a good example of such documents. The function of the testing was to determine whether or not further refinements to the Analytical Model (the questions and procedures) were required. This section reports on the questions and procedures derived from the review of literature as well as the steps taken to test these questions and procedures.

Generation of the questions making up one attribute of the Analytical Model was aided by the use of a matrix as suggested by Porter, et al, (1978). Dimensions of the matrix are taken from the five commonplaces (criteria) of a curriculum theory generalized from the work of Herrick and Tyler (1950), Johnson (1967), Beauchamp (1968, 1975), and Payne (1969). The matrix permitted the development of two sets of questions. The first set of questions based on the categories making up the horizontal and vertical axes was used to conduct a broad analysis of the documents while sub-questions based on the intersection of the categories contributing to each cell of the matrix guided the evaluator in making judgements about the statements identified through the broad analysis.

insert Figure 3 here

1. Statements of IDEOLOGY
determine stated
values on:

That Influence
Statements on:

	a) GOALS	b) SOURCES	c) NATURE OF LEARNERS	d) LEARNING THEORY
2. DESIGN	2a	2b	2c	2d
3. PROCESSES	3a	3b	3c	3d
4. EVALUATION	4a	4b	4c	4d

5. Key terms used in all statements are defined.

Figure 3

MATRIX FOR GENERATING CRITERIA FOR
CURRICULUM GUIDELINES

Questions for the Broad Analysis - Questions for the broad analysis are based on the five areas of agreement about curriculum theories as previously identified.

1. What value positions did the writers take as reflected in: statements of ideology, statements of general goals for a curriculum, statements identifying sources for a curriculum's content, statements identifying beliefs about the nature of learners for whom the curriculum should be designed, and statements identifying learning theories that should influence curriculum decisions? Statements of ideology are those which indicate the "basic orientation" (Herrick and Tyler, 1950, p. 121) and give rise to explanation of "what additional criteria are imposed in curriculum selection" (Johnson, 1967, p. 137) and "choice of goals (Payne, 1969, p. 9). Goal statements are statements of intent which reflect the "philosophy, beliefs, or empirical evidence" (Payne, 1969, p. 9) that direct the decision making. Johnson (1967) suggested "various criteria may govern selection of curriculum from available content" (p. 137). Beauchamp (1975) named some possible sources of content as being: the results of adult surveys and job analysis, recognized disciplines, the results of needs assessments, cultural and societal needs, past experiences in curriculum, and social and political authority (p. 78-79). Statements about the nature of the learners for whom the curriculum should be developed must include those that speak of the learners' "motivation", "maturation and capacity" and "cognitive processes" (Payne, 1969, p. 11). Statements about learning theory should include responses to Payne's (1969) two questions:

Is there a statement of belief about learning or the learning environment or about the practice of instruction intended to apply to all phases of the program? (p. 8)

Are there any explicit statements about the nature of learning and the conditions under which it occurs? (p. 11)

2. What statements did the writers of the documents make to give direction to the design or organization of the curriculum content? The term "design" is used in the noun form in this question and refers to "an organizing scheme" (Herrick and Tyler, 1950, p. 67). The intent of statements giving direction to a curriculum's design is to maximize the "cumulative effect in curriculum learning" (Herrick and Tyler, 1950, p. 67) through "effective sequence" (Herrick and Tyler, 1950, p. 44) that shows "orderings that are mandatory for instruction" (Johnson, 1967, p. 138). The "vertical" and "horizontal" (Herrick and Tyler, 1950, p. 44) organization of the curriculum may be directed by statements that show "major divisions, departments, courses" (Payne, 1969, p. 8), "unit topics, daily topics, specific examples" (Payne, 1969, p. 11), or arrangements of "objectives" (Payne, 1969, p. 11) for courses, units or activities.

3. What statements did the writers of the documents make in order to give direction to the development of the curriculum and use of the curriculum? Development refers to the processes of "selection" (Johnson, 1967, p. 137); Beauchamp, 1975, p. 78) and "organization" (Beauchamp, 1975, p. 78) of the curriculum's content. Statements directing these processes could include, as suggested by Herrick and Tyler (1950), an indication of those persons responsible for the various decisions at the different levels within the curriculum system. Payne (1969) raises a number of questions that could be answered in statements giving direction to use of the curriculum. Most of her questions focus on the relationship between teacher decisions and directives given in guidelines. In particular she suggests

that the guidelines should make clear where teacher autonomy is given and where conformity to directives is demanded in decision-making areas such as "goals, objectives, activities, and materials" (p. 15).

4. What statements did the writers of the documents make in order to give direction to the assessment of curriculum decisions? The major purpose for assessment of curriculum decisions is to provide feedback that supports "continuous regeneration of curriculum decisions" (Beauchamp, 1975, p. 82). Beauchamp (1975) identified evaluation of teacher use of the curriculum, evaluation of the design and evaluation of pupil outcomes as sources for feedback concerning decisions. Johnson (1967) suggested "empirical evidence based on instruction can identify structural errors and omission in selection" (p. 139) of content. Payne (1969) recommended that "criteria for selecting and organizing subject matter and materials" (p. 11) should be given along with "purposes" (p. 11) and possible "methods" (p. 11) or "procedures" (p. 11) for conducting evaluation. Also, Payne (1969) indicated that suggestions "for the analysis and use of the results of evaluation" (p. 11) might be given in curriculum plans.

5. What definitions were given to terms used in statements responding to the first four questions directed to the broad analysis? The definition of technical terms helps to "define the subject matter" (Beauchamp, 1975, p. 58) addressed by the guidelines. Payne (1909) noted that "clarity" (p. 13) is brought about through "the definition and consistent use of key terms" (p. 13). Terms frequently represent concepts. The definition of key technical terms is necessary to enable the reader of documents be able to understand the relationship of such concepts to one another within the theory or guideline.

Sub-questions to direct judgements. Implicit in the definition given to the term curriculum theory and implicit in the matrix shown in Figure 3 is relatedness of statements making up a curriculum theory or a curriculum guideline. The relatedness is achieved through the connection of statements giving direction to the development, use and evaluation of a curriculum to the statements expressing value positions. Each of the questions making up the criteria for making judgement about the statements gathered through the broad analysis represents an intersection of a values concept with a design, process or evaluation concept. The intersecting concepts for each question reflect the variables affecting the respective cells in the matrix of Figure 3.

2.a. How are the stated goals of the curriculum reflected in statements giving direction to the design or organization of the curriculum.

b. How are statements on content sources for the curriculum reflected in statements giving direction to the curriculum's design or organization?

c. How are statements on the accepted view of the nature of learners reflected in the statements giving direction to the design or organization of the curriculum?

d. How are statements indicating the accepted theories of learning reflected in statements on the design or organization of the curriculum?

3.a. How are the stated goals of the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?

b. How are statements on the content sources for the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?

c. How are statements on the accepted views of the nature of learners reflected in statements giving direction to the processes for the development and use of the curriculum?

d. How are statements indicating the accepted theories of learning reflected in statements giving direction to the processes for the development and use of the curriculum?

4.a. How are the stated goals of the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?

b. How are the statements on the content sources for the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?

c. How are the statements on the accepted views of the nature of learners reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?

d. How are the statements indicating the accepted theories of learning reflected in statements giving direction to or criteria for the evaluation of curriculum decisions?

Procedures for application of criteria to guidelines - A review of the literature (as reported earlier in this chapter) led to the generation of a number of criteria (questions) to be directed to documents purporting to express a curriculum theory or curriculum guideline. The questions act as a "conceptual framework" (Frye, 1957, p. 15) for examining such documents

for they represent the "organizing or constraining forms" (Frye, 1957, p. 15) of a curriculum theory. In essence, they are generalizations about curriculum theories and not the organizing form of any one theory in particular. They represent "factors external to the content" (Gagné, 1978, p. 8) of a theory yet factors that influence the generation of a theory or guideline. Since the questions represent generalized concepts of what a curriculum theory or guideline ought to include, they permit the evaluator of theories and guidelines to make judgements "without distortion or oversimplification" (Kelly, 1975, p. 103) of the content of such materials. As such, the questions act as "norms" (Taylor, 1961, p. 104) that are appropriate and valid due to their source (that being the collective wisdom of experts addressing the topic of curriculum theory criteria). Furthermore, the questions are appropriate because they accommodate the "pluralism" (Willis, 1975, p. 9) found in curriculum as a field of study.

A set of questions and a set of sub-questions were generated to conform to the two-step process involved in content analysis as outlined by Gibbons (1977), Freeman (1978), and Hopkins (1980). (As noted above the questions were developed from generalized concepts about curriculum theories.) The first step in the content analysis procedure is to direct the questions to the document(s) under review in order to identify all statements satisfying the concept of a curriculum guideline. The questions making up the criteria for this step are intentionally broad in order to prevent premature rejection of certain statements included in the documents, that is, rejection of statements before a more refined or critical judgement can be made of them. The supporting statements accompanying each question in the broad analysis stage permit the evaluator to direct the questions consistently and without

losing track of the breadth of the questions. Once all statements satisfying each of the questions are culled from the documents under review the second set of criteria (sub-questions) can be applied to them in order to make more refined judgements about their appropriateness or validity.

The second step in the content analysis process requires the directing of questions (sub-questions) "unfalteringly" (Carney, 1972, p. 6) to the statements gathered through the broad analysis. Consistency in approach is facilitated because the sub-questions used in the second step each bring together two concepts thereby making the description of the content of intended responses more complete. The questions permit the intended network of connections between and among concepts expressed in the theory or guideline being reviewed to emerge and be examined as suggested by Gibbons (1977) and Posner (1978). A response to a question in this stage of the analysis represents, as suggested by Kelly (1975), a "judgment or verdict" (p. 101) that the particular statement is appropriate for inclusion in the guideline because it relates to a stated value, "the reason or reasons for the judgement" (p. 101) and it satisfies a "norm" (p. 101) established through the relationship of the criterion or question to a generalized concept of a curriculum theory.

Assuming that the Analytical Model applied to a curriculum guideline is accurate and complete and assuming the guideline to which the model is being applied is a good example of such documents, certain judgements can be made about the findings:

1. Statements appearing in the guideline that do not satisfy one or more of the questions used in the broad analysis step are not pertinent to the essence of the guideline. (Such statements may simply be neutral

or related to the guideline in a supportive or non-essential way).

2. Statements appearing in the guideline that satisfy the second, third or fourth of the criteria in the broad analysis step but do not satisfy the first criterion would be judged as irrelevant because they do not follow logically from the stated values position of the writers of the document(s) being reviewed. Such statements would not truly guide curriculum decision-makers in a consistent way for they would tend to confuse the reader rather than clarify the processes involved in developing, using or evaluating the curriculum.

Testing the Analytical Model

As the Analytical Model presented was developed the four generalizations about theories in general presented at the outset of this chapter served as a primary checklist to ensure that the qualities of a stated theory were in place. The five criteria for a curriculum theory, identified in the literature with the aid of the four generalizations about theories in general, served as a secondary checklist to ensure that the starting points for the construction of the model were present. A crucial test of the model came with the attempt to falsify (or verify) the validity of the model's content by examining the questions presented in the model in the light of a guideline (the kind of phenomena being addressed by the theory).

One of the limitations of the study at hand, as indicated in Chapter 1, is that the questions and procedures making up the Analytical Model were applied to a single curriculum guideline. It was assumed, however, from the review of events leading up to the production of the present guidelines for developing, using, and evaluating a curriculum for the

grades Kindergarten through six in Ontario schools, that such guidelines are a good example against which to test an Analytical Model (questions and procedures) for evaluating such documents. Therefore the following steps were taken:

1.0 The Analytical Model was applied to the two Ontario Ministry of Education Documents entitled The Formative Years, (Appendix B) and Chapters 1, 2, and 3 of Education in the Primary and Junior Divisions (Appendix C).

1.1 In turn, each question (1 through 5) making up the criteria for the broad analysis of documents was applied to the documents noted above. Statements found in response to the questions in the documents were noted. Statements found in the documents and not providing a response to any one of the questions in the broad analysis step were also noted.

1.2 In turn, each sub-question (2a through 4d) was applied to statements culled by the questions used in the broad analysis step. Statements satisfying each sub-question were noted and statements not satisfying any one of these criterion were also noted.

2.0 Judgements were made about the statements that did not satisfy the questions applied in step 1.1 and step 1.2.

2.1 Statements in the guidelines that did not satisfy one of the questions used in the broad analysis step were judged to be:

2.1.1 not essential to the guideline or

2.1.2 essential to the guideline but not accommodated by the Analytical Model thereby requiring either a change in the stated questions or an addition to the number of questions.

2.2 Statements culled from the guidelines by the questions used in the broad analysis step that did not respond to one of the sub-questions used in the second step of the content analysis were judged to indicate a need to expand one of the two variables (questions for the broad analysis) contributing to the cells making up the matrix in Figure 3 and ultimately the number of sub-questions used in the second step of the content analysis.

The results of steps 1.1 and 1.2 are reported in the next chapter. Chapter IV reports the results of steps 2.1 and 2.2 where findings about the Analytical Model are analyzed in light of the model's application to the Ontario guidelines.

The test of the Analytical Model to an existing guideline, as delimited in the design of the present study, does not preclude other ways and means for evaluating the instrument. Testing the model to a guideline, assumed to be a good example of such documents, was consistent with the other delimitations of the study. Other curriculum analysis schemes, however, could be used as a basis of comparison. In particular the criteria found in schemes such as those developed by Eraut, Goad and Smith (1975), Tyler and Klien (1976), Stevens and Morrissett (1968), Eash (1972), and Robinson

(1978) may serve as valuable bases for comparison with the criteria presented in the Analytical Model reported in this study. Such an exercise of comparison may prove valuable because unlike the present study that focussed on criteria for assessing curriculum guidelines, the other schemes focussed on aspects of the curriculum enterprise related to guidelines, subsumed by guidelines or initiated by guidelines. The criteria from the other schemes, therefore, may provide a means to check whether or not all appropriate phenomena are attended to by the present model. Other curriculum analysis schemes, particularly those noted above, are treated in the discussion chapter of this thesis in order to help identify where the present study fits into the body of literature on curriculum analysis.

Summary

A review of literature addressing the topic of theories in general led to four generalizations about stated theories. These generalizations or concepts were used to screen literature on curriculum theory in order to identify particular works that addressed all four concepts in a curriculum theory context. Four sources were identified: Herrick and Tyler (1950), Johnston (1967), Payne (1969), and Beauchamp (1975). Following a review of the literature treating the breadth of the field examined by curriculum theories these four sources were examined and five criteria for curriculum theories, were identified. These five criteria, along with concepts extracted from the literature on content analysis, were used to generate a set of questions and procedures making up a model for the analysis of curriculum guidelines. Finally, the procedures for testing the model to a curriculum guideline were outlined with results to be reported

in the third chapter.

Two controlling variables gave shape and direction to the chapter. First, the second delimitation of the study was used to maintain the global conception that curriculum theories and curriculum guidelines both deal with the phenomena of curriculum development, use and evaluation. The second controlling variable, presented at the beginning of the chapter, was the group of four concepts about theories in general. These generalizations were critical to the identification of appropriate starting points for the development of the Analytical Model and the selection of the means by which the model has been tested. The model is clear about the phenomena with which it deals - curriculum guidelines. Its criteria (questions) call for the definition of key terms and a logical relationship amongst concepts employed in curriculum guidelines. Since the specified intent of the model is to direct the analysis of curriculum guidelines, it was appropriate to test the model to a guideline to determine whether or not the model truly treated the characteristics of such documents.

Chapter III

PRESENTATION OF FINDINGS

The Analytical Model outlined in the previous chapter was applied to two Ontario Ministry of Education publications. The purposes of the two documents, Circular P1J1: The Formative Years (P1J1) and Education in the Primary and Junior Divisions (EPJD), are to summarize "provincial goals and expectations" (P1J1, 1975, p. 1) and provide "an extensive philosophical basis and rationale for the program" (EPJD, 1975, p. 3) in the primary and junior divisions. Although P1J1 is the only policy document of the two reviewed attention is given to EPJD because the policy document (P1J1) states:

A book entitled Education in the Primary and Junior Divisions, which will provide a philosophical basis for the program in these divisions, will also be published. (P1J1, 1975, p. 1)

This statement, because it appears in the policy document, makes of EPJD something more than good advice to be either taken or ignored.

The appropriate sections from P1J1 reviewed in this study appear as Appendix B. Sections of EPJD reviewed through the Analytical Model are reproduced in Appendix C. Sections of the documents that were not given close critical analysis through the model were those that did not deal directly with providing a general guideline for curriculum decision-making within a curriculum system. As a result, sections of the documents that were devoted to general content suggestions or extensions of the guideline to specific subjects were not reviewed for inclusion in this report.

The findings garnered from application of the Analytical Model to the two documents noted above are summarized under the sub-headings Values

Statements, Design Statements, Process Statements, Evaluation Statements, Definitions of Key Terms, and Statements not Identified by the Model. Relationship of statements to the various questions of the model and relationship of statements to one another are pointed out.

Values Statements

Summarized below are the statements identified through the application of the first question used in the broad analysis step of the analysis - What value positions did the writers take as reflected in:

a) statements of ideology, b) statements of general goals for a curriculum, c) statements identifying sources for a curriculum's content, d) statements identifying beliefs about the nature of learners for whom the curriculum should be designed, and e) statements identifying learning theories that should influence curriculum decisions?

On Ideology

The Ontario Ministry of Education believes that "the goals of an educational system reflect the values held by the community" (EPJD, 1975, p.5) when the goals evolve through a "cyclical review" (P1J1, 1975, p. 4; EPJD, 1975, p. 3) process that involves a broad spectrum of Ontario society. It has been deemed by the Ministry, through the review process, that the focus of the curriculum should be on the "individual" (P1J1, 1975, p. 1, 4; EPJD, 1975, p. 5, 11). The purpose of the curriculum is to "nurture" (P1J1, 1975, p. 4: EPJD, 1975, p. 5) the "growth" (P1J1, 1975, p. 4: EPJD, 1975, p. 5) of each child by responding to his "talents and needs" (P1J1, 1975, p. 4; EPJD, 1975, p. 5) in situations where he is not limited by his "ability, physique and personality" (EPJD, 1975, p.10) nor by "sex-role stereotypes" (P1J1, 1975, p. 4).

It is recognized that for the individual to be able to cope with the adult world of Canadian society "as a skilled, free, and purposeful

person able to manage himself (...) in an open society" (EPJD, 1975, p. 11) and respond to the values of "respect for the individual, concern for others, (...) social responsibility, and the acceptance of work, thought and leisure as valid pursuits of human beings" (EPJD, 1975, p. 5) held by that society, certain "basic skills, knowledge and attitudes" (PIJ1, 1975, p. 4) must be learned. Furthermore, it is believed that only through the acquisition of such skills, knowledge and attitudes that the individual can "share in the life of the community with competence, integrity and joy" (PIJ1, 1975, p. 4: EPJD, 1975, p. 5).

On Goals

Four basic goals for a curriculum follow from the ideology summarized above. Both documents reviewed suggest that each child should be provided with opportunities to:

- acquire the basic skills fundamental to his or her continuing education;
- develop and maintain confidence and a sense of self-worth;
- gain the knowledge and acquire the attitudes that he or she needs for active participation in Canadian society; develop the moral and aesthetic sensitivity necessary for a complete and responsible life. (PIJ1, 1975, p. 4: EPJD, 1975, p. 6-7)

Each of the goal statements is expanded upon in EPJD (1975). These elaborations carry direct implications for statements on sources of content and design or organization of the curriculum. In particular, the supplementary statements for each of the goals add to interpretation of statements appearing in response to part a of question 1 in the broad analysis step and questions 2a and 2b of the Criteria for Making Judgement.

Statements supplementing the first stated goal are:

- (i) Each individual must be encouraged to acquire, to the limit of his or her individual physical, mental, and emotional capacities, the basic knowledge and skills needed to comprehend and express ideas through words, numbers and other symbols.

These basic skills fall into four broad categories:

- (a) the ability to comprehend ideas through reading, listening, and viewing;
 - (b) the ability to communicate ideas through writing, speaking, and other visual and non-verbal media;
 - (c) the ability to understand and employ mathematical operations and concepts;
 - (d) the ability to apply rational or intuitive processes to the identification, consideration, and solution of problems.
- (ii) Each individual should develop skills of inquiry, analysis, synthesis, and evaluation. Children who acquire such reasoning skills will be able to continue learning throughout their lives. (EPJD, 1975, p. 6)

To elaborate upon the second stated goal the following statements are added:

- (i) Education must make a major contribution to the intellectual, social, emotional, physical, moral, and cultural development of each individual.
- (ii) Each individual must be encouraged to develop such attributes as intellectual curiosity, awareness, sensitivity, perseverance, and a desire for excellence.
- (iii) Education must respond to each individual's need to develop a positive sense of self, including a desire for competence and continuing self-development and self-evaluation. The development of this sense of self-worth will enhance the individual's desire to understand and examine personal interests, abilities, and goals and to reassess them in keeping with the needs of an ever-changing environment. (EPJD, 1975, p. 7)

The third goal is supplemented by these statements:

- (i) Education must prepare the individual child for life in our society by assisting him or her to gain insight into the functioning of society and the individual's role within it.
- ii) Education must assist individuals to gain an understanding of themselves as well as of persons belonging to social and cultural groups different from their own.
- (iii) Education must assist individuals to develop the physical fitness and acquire the knowledge that will enable them to take advantage of the opportunities open to them for a satisfying and healthy life. (EPJD, 1975, p. 7)

The fourth goal is extended with the addition of these following statements:

- (i) Individuals should be given the opportunity to develop an appreciation of their cultural heritage, of the environment in which they live, or art, music, and literature, of the place of mathematics and science in the world's daily work, and of the importance of commerce and industry in the life of nations.
- (ii) Education should encourage individuals to develop an appreciation of the ethics of their society and the conduct prescribed by such ethics.
- (iii) Education must assist individuals to develop self-respect, respect for others, and respect for law.
- (iv) Education must be conducted in such a way that each child may have the opportunity to develop abilities and aspirations without the limitations imposed by sex-role stereotypes or other forms of discrimination. (EPJD, 1975, p. 7)

On Sources

The Ministry identified two major sources of influence on curriculum decision making. They are 1) "significant research conducted in Canada and abroad" (P1J1, 1975, p. 4) and 2) "the recommendations and viewpoints contributed by teachers, parents, trustees, administrators and other citizens of the province through the cyclic review process" (P1J1, 1975, p. 4). Many of the research findings are summarized in the following sections of

this chapter: 1) On the Nature of Learners and 2) On Learning Theories. It must also be noted that the cyclic review process contributes to the evaluation procedures for the curriculum.

As previously indicated, the goal statements have implications for content sources. These sources are summarized in the statement:

It is assumed that the source for content will be the environment - people, things and symbols. (EPJD, 1975, p. 17)

With the curriculum focussing on the individual children with their various needs and talents, more attention is given to the needs and characteristics of children, as dictated by their nature in primary and junior years, than is given to the notion of content sources in isolation of pupil needs.

On the Nature of Learners

Statements about the nature of learners in the primary and junior divisions of schools center upon cognitive, social, moral and physical development. Taking the position that all children, in spite of variances in background and ability, need opportunities to "explore their environment and to expand their perception of the world" (EPJD, 1975, p.11) the Ministry suggests that "essential to their perceptual and conceptual development are sensory experiences with all sorts of manipulative materials" (EPJD, 1975, p. 11).

Recognition is given to different growth rates between boys and girls and their apparent effect on social maturity and ability as perceived by others. The low correlation of physical size and pace of development to mental ability and social maturity is also noted. (EPJD, 1975, p. 10) The Ministry further recognizes that the "acquisition of skills is related to the development pattern of children" (EPJD, 1975, p. 21) and "that children

have individual needs and styles of learning and that they need experiences in working both independently and in groups" (EPJD, 1975, p. 22).

Particular attention is paid to the formation of certain concepts by children and the conditions that enhance growth in these areas. Outlined in EPJD (1975, p. 13-14) are the following concepts to be developed and/or extended through the curriculum:

1. the concrete relationships of near to far, inside to outside, before to after and cause to effect;
2. the increasingly abstract concepts of space - personal space, action space, body space and symbolic space;
3. the concept of surface as it relates to varying shapes;
4. the concept of invariance whereby children come to understand volume may not vary when the shape of containers does;
5. the concept of time as it relates to elapsed time, family generations, past and present;
6. the geographical concepts of immediate locality or routes frequently travelled by children, to village, to town, to community, to region, capital city, and society;
7. the concept of rules that govern or regulate behaviour,
8. seeing situations from another's point of view.

The major variables identified as contributing to the development of these concepts are 1) concrete experiences and 2) maturation. (Consideration of the experience variable has implications for the process question of the broad analysis and question 3d of the Criteria for making judgement.)

The maturation variable relates to the design question of the broad analysis and question 2a of the Criteria for making judgement.)

The Ministry provides the following assumptions about children as learners to guide curriculum developers in selecting and organizing learning opportunities appropriate to the nature of the learners:

Children are curious. Their need to explore and manipulate should be fulfilled through handling real things that involve more than one sense. The more all the senses are involved, the more effective the experience.

Most human activity is a purposeful search for pattern. This includes organizing new information and relating it to previously developed concepts. Incongruity between old patterns and new experiences stimulates questioning, observation, manipulation, and application in a variety of new situations. Maintaining the right balance between novel and familiar experiences in learning situations is one of the most vital tasks in the art of teaching.

Learning experiences gain power if they are part of organized and meaningful wholes.

Children have an intrinsic need for mastery over situations, a need that they express by using their experiences to search out the significant patterns in reality and thus reduce uncertainty.

Children find self-fulfilment in successful learning, and are not motivated merely by external rewards and approval. Pupils engaged in self-rewarding activity with a sensitive, consistent teacher who makes demands appropriate to their own level are having a happy experience.

Play is an essential part of learning. It is free from the restrictions of reality, external evaluations, and judgement. Children can try out different styles of action and communication without being required to make premature decisions or being penalized for errors. Play provides a context in which the teacher can observe children's handling of materials and social situations, assess their stage of development, and encourage experiences that further their growth. The teacher should know when to intervene unobtrusively, when to add to or change a play situation, when to provide a toy telephone, a costume, a question, or a suggestion that will further the fantasy or broaden the experience.

Children learn through experience with people, symbols, and things. Things may be objects, events, processes, or relationships.

The symbolic process for children develops through a sequence of representation. Initially children must understand that a real object can be represented by such symbols as a spoken word, gesture, dramatic movement, toy, model, picture; ultimately they must understand that an object can be represented by the printed word. The development of symbolism underlies the communication, recording, and coding of experience in a condensed and systematic form. Full understanding of symbols, however, is slow to emerge. (EPJD, 1975, p. 15-16)

On Learning Theories

In the general area of learning theory the Ministry has provided a number of considerations for curriculum decision makers. These considerations include conditions affecting learning outcomes in general, conditions affecting concept development, conditions affecting transfer, and the relationship of particular schools of learning theory to various kinds of learning.

Variables affecting school learning in general, as identified by the writers of the documents reviewed, fall into two categories: 1) intrinsic factors and 2) extrinsic factors. Intrinsic factors to be considered include "the stages of the individual child's emotional, physical, cognitive and moral development, his or her general abilities and special talents" (EPJD, 1975, p. 9), "sense of self-identity" (EPJD, 1975, p. 9), "needs for security and self-esteem" (EPJD, 1975, p. 9) and the amount of "tension" (EPJD, 1975, p. 9) generated by new learning situations. It is noted that value learning in particular is affected by these intrinsic factors for it is when the child "accepts as personal precepts" (EPJD, 1975, p. 5) those values presented in the curriculum that learning has taken place.

Extrinsic factors identified as influences on pupil learning and

therefore considerations for curriculum developers are: "pre-school experience which sets expectations, motivates and reinforces the child's particular style of learning, and affects language patterns" (EPJD, 1975, p. 9); "pre-school environment" (EPJD, 1975, p. 9) and "interaction" (EPJD, 1975, p. 17) with the teacher and others. Skill learning and concept learning are particularly enhanced by extrinsic factors such as the number of "examples" (EPJD, 1975, p. 21) used or available, or the opportunity to imitate models of behaviour as demonstrated by the teacher or others.

Three variables affecting concept development have been identified. They are 1) using materials appropriate to the learner's "level of comprehension" (EPJD, 1975, p. 21), 2) avoidance of simplification "to the point of distortion" (EPJD, 1975, p. 21), and 3) the revisiting of concepts presented in the curriculum on "successively higher levels of generalization" (EPJD, 1975, p. 21). (These variables are also pertinent to questions 2d and 3d on design and process).

Factors affecting the transfer of learning particularly as it relates to concept extension are: 1) time and 2) experience. The Ministry states that "understanding has to grow in its own time for each child" (EPJD, 1975, p. 21) and "major understandings may grow out of years of experience of the same concept in its many variations" (EPJD, 1975, p. 21).

The writers of the reviewed documents outlined in a succinct fashion the relationship of the behaviourist school of theory and the cognitive school of theory to various kinds of school learning. Statements on the two schools of thought follow.

(The following statements have carry-over to 2d of the design questions and 3d of the process questions.)

The behaviourist approach is based on the assumption that learning can be analysed into stimulus-response patterns and conditioning based on the laws of reinforcement, association, and repetition. The application of behaviourist principles to task analysis in learning has demonstrated that skills, concepts, and understandings can be built up from a succession of simpler skills or sub-concepts. One application of behaviourist principles is programmed instruction, in which a child learns through a self-reinforcing program arranged in finely graded steps. Behaviourists explain the acquisition of habits or simple motor skills in the same way. Complex visual-motor skills such as those found in creative writing and in reading, however, are difficult to explain by behaviourist assumptions; they require more complex explanations.

The cognitive-field development approach is based on the assumption that learning is an orderly development in successive patterns of increasingly intricate mental structures. These mental structures develop as the child grows through experience with people, things, and symbols. According to this theory, learning is purposeful and the child is an agent in organizing his or her own knowledge. Of the two approaches, a cognitive explanation is more appropriate in dealing with complex behaviours such as communication, concept-formation, and problem-solving. (EPJD, 1975, p. 10)

Design Statements

Question 2 of the broad analysis step in the review of documents using the Analytical Model is: What statements did the writers of the documents make to give direction to the design or organization of the curriculum content? Statements found in the reviewed documents that respond to this question are summarized below under subtitles reflecting the various criteria for making judgement about design statements.

Design Statements Related to Goals

In applying question 2a of the Criteria for Making Judgement a number of statements identified in the broad analysis step as giving

direction to the design or organization of the curriculum were judged to be directly related to the stated goals. In EPJD (1975) it is stated:

The Formative Years identifies a number of aims that are components of the preceding goals, as well, a number of more specific learning opportunities that contribute to each of these aims, thus establishing expectations for the programs developed for the Primary/Junior Divisions. (p. 7)

Decision making at each of the various levels within the Ontario curriculum system contributes to the overall design. The above quote broadly outlines the Ministry's contribution to the design. More specifically in the Document P1J1 (1975) the Ministry states that it is responsible for a) establishing "a common framework of goals and aims" (p. 2) and b) setting "out in a general way the learning opportunities that the schools should make available" (p. 2) for the children in the primary and junior divisions under "communications (Language arts and mathematics) (...) for each division (p. 5) and "the Arts and (...) Environmental Studies" (p. 5) for both divisions combined. It falls to the local school boards and in particular the schools to round out the design by working out "the particular arrangement of objectives, content and learning experiences" (P1J1, 1975, p. 2) that contribute to meeting the established goals and aims.

Design Statements Related to Sources

Summarized below are statements from the documents gathered by question 2 in the broad analysis step of the review and judged as responding to question 2b of the Criteria for Making Judgement.

The Ministry, in stating its value position on the source of content for the curriculum, identified "people, things and symbols" (EPJD, 1975, p.17) as the contributors. These sources are not allied to

any one subject or discipline. They leave open the organization of integrated activities (EPJD, 1975, p. 25) that allow "different resources to serve several purposes and to reinforce one aspect of learning through another" (EPJD, 1975, p. 25).

The Ministry further states, "Effective planning implies making the best use of resources, both human and material." (EPJD, 1975, p. 25). The materials to be provided include "textbooks" amongst measuring devices, tools and other materials (EPJD, 1975, p. 25). The notion that texts can contribute to content and that within broad content areas certain traditional disciplines can be found (i.e. communications is made up of Language and Mathematics.) the conclusion that content from the traditional disciplines or subjects can inform even integrated activities is implied. In fact, much of the broad content outline supplied by the Ministry (PIJ1, 1975, p. 6-23) takes on a loose subject-centredness.

Design Statements Related to Nature of Learners

Statements satisfying question 2c of the Criteria for Making Judgement are summarized in this section. These statements were first identified as satisfying question 2 in the broad analysis step.

In PIJ1 (1975) the Ministry states that "to be effective, curriculum must be closely related to the characteristics and needs of the particular pupils for whom it is planned" (p. 2). Discussion about pupil needs and characteristics is centered on two themes: a) the curriculum should be sequenced in such a way as to recognize general developmental characteristics of children, b) the curriculum's content, sequence or pace should be adjusted to meet the particular needs of certain individuals.

General developmental characteristics of children identified as having implications for curriculum organization are: a) children move

from being able to handle "experiences with concrete objects and real phenomena through visual symbols towards abstractions" (EPJD, 1975, p. 12) and b) the rate at which children move through each phase is different from child to child. As a result, teachers are directed to note: that children should not "spend excessive time working on skills prematurely" (EPJD, 1975, p. 21); "short intensive periods may be necessary for the development of certain skills" (EPJD, 1975, p. 23); "although some children will reach the level of abstract reasoning by the end of the Junior Division (...) for many children, reasoning remains concrete and practical and confined" (EPJD, 1975, p. 12).

Design Statements Related to Learning Theory

Three concepts emerged from the documents reviewed when design statements identified through the broad analysis were examined through question 2d of the Criteria for Making Judgement. First, the concept that "integration of learning activities allows different resources to serve several purposes and to reinforce one aspect of learning through another" (EPJD, 1975, p. 25) suggests that learning activities could be organized to cut across two or more traditional subject areas. Second, "experiences that reinforce each other in learning should occur close together" (EPJD, 1975, p. 24) is a concept that tends to provide a rule for sequencing in a way. The third concept, that children, because they learn in individual ways, may not benefit in an optimum way if they are forced to follow "a prescribed sequence" (EPJD, 1975, p. 8), suggests that teacher's schedules should be flexible and such schedules "should be considered only as a guide to be altered as the need arises" (EPJD, 1975, p. 24).

Process Statements

Process Statements Related to Goals

In examining process statements identified through the broad analysis in light of question 3a of the Criteria for Making Judgement it became clear that decision making in the development of a curriculum in Ontario is assigned to two broad constituencies, the Ministry and local boards made up of teachers, principals, and supervisory officials. Duties assigned to each are summarized below with notation of sources in parentheses.

Duties of the Ministry

1. To issue a basic curriculum policy document and various support documents to aid teachers in translating policy to program. (P1J1, 1975, p. 1).
2. To articulate broad goals and summarize curriculum expectations (aims) in a succinct manner. (P1J1, 1975, p. 1, 2).

Duties of Local Boards

1. Supervisory Officials - These persons are responsible for the formulation of "local programs that are within the rationale of the provincial policy and at the same time reflect local needs and priorities" (P1J1, 1975, p. 2). Along with principals they "have particular responsibility for providing leadership in planning and for ensuring that specific objectives and the means used to achieve them are consistent with overall purposes and priorities" (P1J1, 1975, p. 2).
2. Principals - Along with supervisory officials, principals are responsible for providing "leadership in planning" (P1J1, 1975, p. 2).

3. Teachers - The singular responsibility of teachers is to "work out the application of the curriculum in the classroom" (PIJ1, 1975, p. 1).
4. Principals and Teachers - Decision-makers at the school level should "select and adapt the objectives (set at the local level), materials, and sequences that are likely to be most profitable for the children. (EPJD, 1975, p. 8).
5. Supervisory Officials, Principals and Teachers - Collectively, the professional educators at the local level can be expected, by "parents and other citizens" (PIJ1, 1975, p. 2) to have a clear understanding of overall purposes, and of how the various activities planned for children fulfill these purposes" (PIJ1, 1975, p. 3). Further to this the professional educators responsibilities include:
 - (1) planning and implementing programs consistent with the goals and expectations of the Ministry of Education;
 - (2) assessing each child's learning on a continuous basis to ensure learning at a level and rate that are in keeping with individuals abilities and, where warranted, diagnosing difficulties and making appropriate changes in the program or teaching-learning strategies;
 - (3) ensuring that each child experiences a measure of success in his or her endeavours, so that each may develop the self-confidence needed for further learning;
 - (4) organizing space and facilities and providing resources that allow scope for imaginative and varied activities;
 - (5) communicating with parents concerning each child's progress.

Programs developed at the local level should provide each child with opportunities to achieve the levels of competence and the forms of growth and development implied in the aims that follow. Such programs should allow individual children to move beyond the expectations of the program without subjecting those who cannot reach them to loss of self-esteem or confidence. The programs should also accommodate any modifications that may be necessary to meet the needs of children with learning or other disabilities. (PIJ1, 1975, p. 5).

Process Statements Related to Sources

Process statements identified through the broad analysis and demonstrating a relationship to the value position(s) taken on sources by the writers of the documents reviewed fall into two categories: 1) those dealing with the production of guidelines 2) those dealing with production and implementation of a curriculum.

Guideline Production

Guidelines produced by the Ministry emerged from input given by the various interest groups (teachers, principals, supervisory officials, trustees, parents, etc.) during "the Primary-Junior Cyclic Review" (EPJD, 1975, p. 3). Information was gathered by the Ministry's "Curriculum Revision Committee" (EPJD, 1975, p. 3) through "discussions, surveys and briefs" (EPJD, 1975, p. 3). "The PIJ1 Curriculum Revision Committee made a synthesis of these ideas and identified, within the framework of present knowledge and ways of thinking about education in early years, the kinds of school experience most likely to lead to the full development of each child's potential" (EPJD, 1975, p. 3).

Curriculum Production and Implementation

The environment, "people, things and symbols" (EPJD, 1975, p. 7), was identified as the source of the curriculum's content. This fact was taken into account in the review processes that led to the production of the curriculum guidelines. Contained within the guideline (PIJ1, 1975, p. 6 - 23) is a broad outline of content determined to be a reflection of what is desirable in the minds of those who were consulted.

Although the classroom teacher is ultimately responsible for the implementation of the curriculum, the Ministry suggests that the experiences had by children through the curriculum must bring them to an "awareness of the disciplines of knowledge, which are (...) patterns of ways of perceiving and organizing the environment" (EPJD, 1975, p. 20). The teacher must organize the curriculum in such a way as to show the relationship of the disciplines and the children's experiences to the broad outline of content found under the general headings of "Communications, the Arts, and Environmental Studies" (EPJD, 1975, p. 20).

The Ministry recognizes that not all good learning opportunities can be anticipated by the teacher and/or others. Therefore, it is suggested that "both the teacher and the child should be involved in choosing content" (EPJD, 1975, p. 17). Further to this the Ministry stated:

In either case, the teacher fashions the topic into a content vehicle through which he or she can assess the needs of each child and through which the child is enabled to acquire the values, concepts, information, opinions, techniques, learning strategies, and skills that the teacher has identified as the objectives of the curriculum.

and

However spontaneous it may appear, good education requires careful planning. Planning may be formal or informal, conducted in groups or by individuals, deliberate or intuitive, continuous or intermittent, or some combination of all these. (PIJ1, 1975, p. 2)

Spontaneity is not totally frowned upon because the Ministry suggested "opportunities for learning that arise outside the context of planned objectives" (EPJD, 1975, p. 18) should not be ignored.

To aid the classroom teacher with the planned or written curriculum, the ministry outlines the following processes for both teachers working alone and in groups.

In many jurisdictions, committees define aims and set priorities in terms of community expectations. They identify local resources, refine perceptions that might affect the general sequencing of instruction, and provide, as temporary assistance for less experienced teachers, more or less detailed outlines of work and sample units.

However extensive this assistance, the major responsibility for planning curriculum rests with the school. Only by accepting this responsibility can it respond to the special needs and characteristics of the children in its care, and work towards achieving the aims of the school and the school system.

Much of the necessary planning (and in some situations almost all of it, especially in relation to day-to-day activities) must be done by the individual teacher. Certain important parts of the planning process are, however, best done co-operatively, in some cases by the entire teaching staff, in other cases by all the teachers of a given division.

Individual teachers have the responsibility of selecting strategies, resources, and activities appropriate to the needs of individual children, who should then be involved in setting short-term objectives, in devising ways and means of accomplishing tasks, and in choosing activities.

Teachers planning by division can articulate objectives for that division and share resources and strategies for achieving them. They should strive to achieve a consistent focus and to eliminate excessive repetition and overlap.

In planning sessions attended by the entire teaching staff of a school, teachers can share ideas and reach consensus on the objectives for each division and on the ways in which they contribute to the overall aims of the school. They can gain a unified sense of direction and a better understanding of the levels of expectations for children of various age groups. In so doing, they will be able to develop a more consistent program with concomitant opportunities for each child to advance at his own rate.

The more communication and sharing take place, the more relevant will be the information available to the classroom teacher, who in the end must make the day-to-day decisions that guide the direction of learning. (P₁J₁, 1975, p. 3)

Process Statements Related to Nature of Learners

Process statements, gathered through the broad analysis step and related to the nature of the learners for whom the curriculum should be designed, focus on the translation of observed pupil needs and individual differences into decisions about grouping and pacing in the classroom. To this end the Ministry suggests that "parents, teachers, principals, supervisory officials, as well as the children themselves must all be involved in the planning process in appropriate ways" (P₁J₁, 1975, p. 2).

At the school or board level, when children "show (...) divergence in their physical, intellectual, communicative, social, or emotional development (...) major curriculum modification and/or special services must be provided for them" (EPJD, 1975, p. 11). Within the context of schools, individual learning needs of pupils should be accommodated through grouping practices. The Ministry suggests, however, that groupings within schools and/or classrooms "should be retained only as long as needed"

(EPJD, 1975, p. 23). Grouping practice should permit a "matching (of) space and people" (EPJD, 1975, p. 23) and therefore may include "two or more classes or age groups" (EPJD, 1975, p. 23).

Purposes identified by the Ministry for grouping pupils include: "teaching of specific skills" (EPJD, 1975, p. 23), following of a particular "interest" (EPJD, 1975, p. 23), increasing opportunities for pupils to "reinforce their own learning" (EPJD, 1975, p. 23) by allowing them to compare their personal experiences and ideas with one another thereby enhancing their growth both "intellectually and socially" (EPJD, 1975, p. 23). It is further suggested in EPJD (1975, p. 11-12, 22-23) that through observing pupils at work in groups or alone the classroom teacher can identify the particular needs of individuals and move to meet such needs on a one-to-one basis while the rest of the pupils are at work. This mode of operation is particularly enhanced when "children have learned to follow their individual sequence, and know when to move from one group to another or when to work alone" (EPJD, 1975, p. 22-23).

Various group settings identified as valuable for pupils in the primary and junior divisions are synopsized in the following way:

It follows that the teacher must plan a variety of groupings to meet these differing requirements. These could include:

- individuals working on assignments, inquiry, research, practice, or prepared materials;
- work groups chosen by the children or suggested by the teacher; In this case, from two to five children work together on a reading or number game, carry out an experiment, make a model, help one another to research a topic, or play together in the house corner, the dress-up corner, or store.

- larger teaching groups useful for separating children according to ability or need;

These larger groups may be useful for teaching specific reading skills, certain aspects of mathematics, and so forth.

- class groups, that is, groups that consist of entire classes.

These are useful for activities such as planning a project, story-telling, physical education, and sometimes drama. (EPJD, 1975, p. 22)

Process Statements Related to Learning Theories

In keeping with the learning theory stated in the value position of the Ministry some process statements gathered through the broad analysis step demonstrate an extension of the theory. Conditions that can be created by the classroom teacher to promote skill learning, value learning and concept learning are given attention.

At a general level the Ministry gives direction to the organization of space and resources in the classroom. Addressing the topic of organization of space the following types of areas are suggested:

- subdivision of large areas into small learning areas, centres, or bays, by means of portable dividers that double as display areas and as storage units, racks, portable bins, trolleys, or shelving;
- movable work space for experiments in mathematics and science as well as storage space for necessary materials and apparatus;
- work benches and storage space for metric measuring devices, tools, and raw materials;
- a water supply and adjacent surfaces suitable for wet and messy work (e.g. activities with sand and water trays);
- surfaces for painting;

- different surfaces and different levels that can be combined into larger working surfaces for groups of children;
- a quiet area for listening, reading, and recording, with storage space for appropriate materials;
- an open space for imaginative play, drama, or story-telling;
- an outdoor area adjacent to the classroom and large enough to accommodate such different activities as free movement and experiments with plants and animals. (EPJD, 1975, p. 25)

Consistent with the learning theory and the sources for the curriculum the Ministry has stated the following about resources:

Effective planning implies making the best use of resources, both human and material. The presence of a rich variety of metric measuring devices, tools, materials, books, and equipment is in itself a stimula to learning. Common to all is the intent to provide children with a variety of first-hand experiences. These resources should be relevant, varied enough to challenge each child, and placed within reach so that they entice the learner to experiment, shape, measure, mould, and master. (EPJD, 1975, p. 25)

Skill Learning

Theoretically the Ministry has stated, "More than one skill can be developed through the same learning activity" (EPJD, 1975, p. 22). The implication of this statement for curriculum development and implementation process is that some skill learning initiated in one area of the curriculum may be extended and/or practised in another. In order to facilitate such learning and transfer it has been suggested that "the teacher's task is to anticipate the various skills and sub-skills required by the topic under study and to help children select and sequence those that are congruent with their own purposes and stage of development" (EPJD, 1975, p. 22).

Other conditions appropriate to aiding skill learning as identified by the Ministry are:

Skills and techniques are learned most effectively when the child sees that they are necessary for a particular task.

Intervention in the form of direct demonstration and/or instruction may be necessary when a skill is introduced or when it is developed to a more complex level.

Skills are refined and improved through practice in a variety of situations.

Pacing should be adapted to the ability and learning style of the child.

Intervention and practice must be flexibly organized for individuals and groups, not necessarily applied to a whole class. p. 22

Value Learning

Three times the Ministry suggests that teachers should provide the "context" (EPJD, 1975, p. 5, 20, 21) in which pupils can work out "a personal system of values" (EPJD, 1975, p. 5, 20) congruent with the stated goals of the curriculum. The context should permit the pupils to experience the following processes:

- becoming aware of the existence of values;
- identifying value alternatives and their consequences;
- selecting personal values from the alternatives;
- internalizing the values selected;
- acting in accordance with the values selected.

(EPJD, 1975, p. 20)

Concept Learning

Keeping in mind that concepts are abstractions (generalizations) from real experiences teachers are encouraged to verbalize concepts "in terms that are comprehensible to the children" (EPJD, 1975, p. 21) on those occasions when it is necessary to synthesize the observations of the children. In working out the instructional program for pupils in the primary and junior divisions, teachers are directed also to provide opportunities for the pupils to see concepts may arise "in different contexts time after time" (EPJD, 1975, p. 21) in order to promote "development (...) integration, application and reinforcement" (EPJD, 1975, p. 21) of such concepts.

Evaluation Statements Related to Goals

Through the broad analysis, three sets of criteria were identified for evaluating curriculum decisions in light of stated goals: those related to assessing the selection of content, those related to the framing of objectives and one related to planning and scheduling learning activities. Listed below are the criteria found in each set that are related to the stated goals:

Criteria for Content Selection

Will it give children an opportunity for direct inquiry, independent study, and creative ability in the context of their own interests, abilities, and developmental needs? Will it fulfill their needs to explore and to manipulate? Will it capitalize on the use of all their senses?

Will this knowledge or technique be personally or socially useful? Will it help children to learn skills that will help them to manipulate, observe, reason, record, and communicate?

Will this content lead to a reasoned knowledge of and pride in Canada and motivate children to build their own understanding of their environment and community? (EPJD, 1975, p. 18)

Criteria for Primary Objectives

Do these objectives interpret and support the major provincial goals?

Which are the most important objectives?

Are these objectives consistent with one another? (EPJD, 1975, p. 8)

Planning and Scheduling Learning Activities

Responsibility for planning activities and using time should be shared with the children. (EPJD, 1975, p. 24)

Evaluation Statements Related to Sources

Following the pattern established in the preceding section, criteria for content selection and framing objectives are presented in the same way in this section of the chapter as well as the two following sections. Additional categories of criteria are given sub titles where appropriate.

Criteria for Content Selection

Will it relate to what the children already know?

Will it spring from real experiences in the children's environment? Is it relevant to their understanding of the world? (EPJD, 1975, p. 18)

Criteria for Framing Objectives

What are the criteria for the assessment of achievement?

Criteria for Ensuring Balance in the Curriculum

- empirical knowledge - that is, the activities and understandings concerned with finding out about things, events, and processes in the physical, biological, and social world, both through observation and experimentation;
- symbolic activities - that is, finding and using symbols such as numbers, shapes, and words;

- aesthetic activities - that is, interpreting and expressing experience in artistic form and recognizing the same process in the work of others;
- ethical development - that is, working out a set of values by which to live and recognizing that each individual is part of the fabric of society and affects its total character by his or her actions;
- integrative activities - that is, synthesizing learning across disciplinary lines. (EPJD, 1975, p. 18-19)

Balance between areas of the curriculum and kinds of learning should be examined on a weekly or monthly basis, not in terms of a single day's activities. (EPJD, 1975, p. 24)

Evaluation Statements Related to Nature of Learners

Criteria for Content Selection

(...) individual children and their ways of learning will remain the basic criteria in choosing content.

Will it satisfy the children's search for pattern by building concepts that can be developed and related to other learning?

Is this content appropriate to each child's level of development?

With this content as a vehicle, will the children be able to know when they have been successful? Will it fulfil the children's basic needs for mastery? Will it provoke questions, involvement, and a desire for further exploration?

Will it encourage learning through play? (EPJD, 1975, p. 18)

Criteria for Framing Objectives

Are these objectives realistic and appropriate for the child or children concerned? (EPJD, 1975, p. 8)

Criteria for Pacing Learning

It is practically impossible to predict the time each child needs for various tasks or experiences. (EPJD, 1975, p. 24)

Evaluation Statements Related to Learning Theory

Criteria for Content Selection

Will it utilize all the channels of learning - visual, auditory, motor-manipulative, olfactory, gustatory, and tactile?

Will it provide experiences with qualitative relationships such as texture, colour, and sounds, and with quantitative relationships such as number, distance, size, and mass?

Will this content provide opportunities for various techniques of investigation?

Will it be sufficiently novel to stimulate questions, observations, and manipulations?

Will the children be able to see what they are learning as part of an organized and meaningful whole? (EPJD, 1975, p. 18)

Criteria for Framing Objectives

What are the conditions under which learning is to take place?

What assumptions about learning must be considered in selecting teaching approaches for these objectives? (EPJD, 1975, p. 8)

Criteria for Scheduling Learning Activities

There is no evidence that any particular learning experience should take place at a fixed time during the day. (EPJD, 1975, p. 24)

Definitions Given to Terms

Definitions are given to three key terms appearing in values, design, process and evaluation statements found in the reviewed documents. They are:

1. Values may be defined as those qualities of life that the individual and/or society considers important principles of conduct and major aims of existence. (EPJD, 1975, p. 5)

2. Curriculum

The Ministry of Education views curriculum as all those experiences of the child for which the school is responsible. Curriculum is, therefore, concerned not only with what should be experienced, but with why, when, where, and how particular kinds of learning should take place, and with the atmosphere in which the learning occurs. Curriculum is concerned with all the human relationships in the school, with the respect in which children are held, with the values, aims, objectives, and decisions of the school community. Hence, it is to the total context of learning in the school (...).

3. Content

Content is more than subject matter or a set of facts and opinions such as those contained in a textbook. It is a major resource for learning, existing for the purposes of providing significant learning experiences for children: information, values, concepts, techniques, strategies, and skills. (EPJD, 1975, p. 17)

Statements not Satisfying Criteria for Broad Analysis

In reviewing the documents PIJ1 and EPJD, all statements were found to support one or more of the questions used in the broad analysis step either directly or indirectly. From time to time the authors of the documents used exemplars as in the case of discussion on "concept" (EPJD, 1975, p. 12, 13, 14, 21) learning and "values" (EPJD, 1975, p. 20) learning. Such statements lent indirect support for the categories.

Statements Satisfying Criteria for Broad Analysis and Not Criteria for Making Judgement .

There were no statements, culled from the guideline reviewed through the broad analysis, that did not find further support from one of the criteria for making judgement. Although some difficulty was experienced in discriminating between statements satisfying the "Nature

of Learners" criteria and statements satisfying the "Learning Theory" criteria under the Values, Design, Processes and Evaluation categories of the broad analysis step, support for the criteria (sub questions) for making judgement was found in the documents reviewed.

Summary

Statements were found in the guideline to support the questions used in the broad analysis step of the procedures outlined in the Analytical Model. When the sub questions, making up the criteria for making judgement, were applied to those statements identified through the broad analysis step, support was found for all of them. No statements were found in the guideline that would suggest incompatibility of the Analytical Model's concept of a curriculum guideline and the reviewed documents.

Discussion of the findings appears in the next chapter.

Chapter IV

DISCUSSION OF FINDINGS

Findings of the present study are discussed under four topics in this chapter. First the findings are examined in light of the literature contributing to the questions of the Analytical Model. Unlike the previous chapter, where statements from the Ontario guidelines supporting the questions in the Analytical Model are reported, this chapter presents an analysis of those statements in order to demonstrate that they not only support the Model developed in the study but the writings that support the instrument's rationale as well. The organizational format for this portion of the discussion does, however, resemble that used in Chapter III.

The second topic of discussion focusses on the implication of the findings for the body of literature on curriculum analysis. Herein the attributes of the Analytical Model are compared and contrasted with those of other analysis schemes identified in the second chapter of this thesis. The primary question directing this portion of the chapter is: To what aspect of curriculum, as a field of study, does the present model attend in comparison with other analysis schemes?

Implications of the findings for curriculum development and implementation activities provide the third focus for the discussion. Through this section of the chapter the ways in which the Analytical Model may contribute to the work of guideline developers and various guideline users are examined.

Finally, the topic of future studies is treated. At this point a number of follow-up studies to the present one are outlined in order to demonstrate that the Analytical Model, like a theory, can generate other studies leading to its falsification.

Support of Contributing Literature

Values Statements

On Ideology - As indicated in the second chapter of this thesis, statements of ideology indicate "the basic orientation" (Herrick and Tyler, 1950, p. 121) and give rise to an explanation of "what additional criteria are imposed in curriculum selection" (Johnson, 1967, p. 137). Such statements influence the "choice of goals" (Payne, 1969, p. 137) and should be evident in a curriculum guideline. This notion is supported by the guideline (documents) reviewed. From the statements summarized in Chapter III it is evident that the guideline presents an ideology that in turn influences extensions of that ideology to various other value positions which act as ground rules for curriculum decisions. The call for a statement (or statements) of ideology by the first criterion used in the broad analysis step of the review (What value positions did the writers take as reflected in: a) statements of ideology, b) statements of general goals for a curriculum, c) statements identifying sources for a curriculum's content, d) statements identifying beliefs about the nature of the learners for whom the curriculum should be designed, and e) statements identifying learning theories that should influence curriculum decision?) is supported

by words, phrases and sentences that suggest a curriculum should focus on the "individual" (PIJ1, 1975, p. 1, 4: EPJD, 1975, p. 5, 11) child with his various "talents and needs" (PIJ1, 1975, p. 4: EPJD, 1975, p.5). Influence of this ideology is reflected in other value positions taken by the writers of the reviewed documents on goals of a curriculum, sources of content, the nature of learners and learning theory.

On General Goals - In the section of Chapter II supporting the first criterion used in the broad analysis, it is stated that goal statements are those which reflect the "philosophy, beliefs, or empirical evidence" (Payne, 1969, p. 9) put forward in the ideology for the purpose of directing decision making. Four basic goals found in the documents reviewed and reported in the third chapter are:

- (...) for each child to the limits of his or her potential to:
 - acquire basic skills fundamental to his or her continuing education;
 - develop and maintain confidence and a sense of self-worth;
 - gain the knowledge and acquire the attitudes that he or she needs for active participation in Canadian society;
 - develop the moral and aesthetic sensitivity for a complete and responsible life. (PIJ1, 1975, p. 4; EPJD, 1975, p. 6 - 7)

These goals, and their supporting statements presented in Chapter III of this thesis, follow logically from the ideology (philosophy and beliefs) outlined in the same chapter. As such, the values position taken by the writers of the reviewed documents includes a statement of goals and, therefore, supports the first criterion to be used in a broad analysis of documents as suggested in the Analytical Model.

On Sources - The first criterion used in the broad analysis step when applying the Analytical Model to a curriculum guideline suggests that the writers of the guideline should state their value position on sources for a curriculum's content. This concept is supported in the documents reviewed.

Beauchamp (1975) suggested possible sources of content. They are: the results of adult surveys and job analysis, recognized disciplines, the results of needs assessments, cultural and societal needs, past experiences in curriculum, and social and political authority (p. 78-79). Much of that which is suggested by Beauchamp (1975) is reflected in the section on ideology reported in Chapter III. The results of the "cyclical review" mentioned in PIJ1, (1975, p. 4) and EPJD (1975, p. 3) and the review of "significant research conducted in Canada and abroad" (PIJ1, 1975, p. 4) led to clarification of the ideology and subsequently the value position that the source of the curriculum's content should be the "environment - people, things, and symbols" (EPJD, 1975, p.17).

On the Nature of Learners - Further support for the first criterion used in the broad analysis step of the documents review comes from the values statements focussing on the nature of learners. Summarized

in Chapter III of this report are statements from the reviewed documents that deal with "motivation and capacity" and "cognitive processes" (Payne, 1969, p. 11). The authors of the documents demonstrate a valuing of a number of theories of child growth and development. Included in these accepted theories are the concepts that: children have an innate need to explore their environment, children need sensory and manipulative experiences, there is a low correlation between physical size and pace of development to mental ability and social maturity, children have individual styles of learning, concrete experiences and maturation combine to affect concept development, human activity is a purposeful search for pattern, learning is enhanced if experiences are seen as part of a whole, intrinsic rewards are more powerful than extrinsic rewards in learning, play is an important aspect of childhood learning, and learning should be initiated through concrete experiences with real things.

On Learning Theories - Finally, the first criterion used in the broad analysis step of the study called for the writers of curriculum guidelines to express a value position on learning theory. Such a statement should express the writers "belief about learning or the learning environment or about the practice of instruction intended to apply to all phases of the program" (Payne, 1969, p. 8). Furthermore, the statement(s) may say something "about the nature of learning and the conditions under which it occurs" (Payne, 1969, p. 11).

This aspect of the first criterion finds support in the reviewed documents. Supporting statements summarized in Chapter III describe intrinsic and extrinsic variables that support learning in general,

variables that affect concept development, and variables that support transfer of learning from one situation to another. Also, statements of learning theory relationships to learning types are extracted from the documents reviewed and recorded in the third chapter. These statements of learning theory suggest that the behaviorist approach to learning best explains simple skill and concept learning and it gives direction to how skills and concepts can be built up on a programmed fashion. The learning theory statements further suggest that the higher cognitive processes and the conditions affecting their development are explained through the cognitive-field approach to examining learning phenomena.

Design Statements

The second question used in the broad analysis step of the study is What statements did the writers of the documents make to give direction to the design or organization of the curriculum content? Statements found in the reviewed documents in support of this criterion were summarized in the third chapter of the thesis in a manner reflecting relationship of the statements to the criteria for making judgements about such findings. This section of the present chapter demonstrates support found for questions 2a, 2b, 2c, and 2d of the Analytical Model.

The function of design statements in a curriculum guideline, as outlined in chapter II of this thesis, is to present a general "organizing scheme" (Herrick and Tyler, 1950, p. 67) in order to produce a "cumulative effect in curriculum learning" (Herrick and Tyler, 1950, p. 67) through an "effective sequence" (Herrick and Tyler, 1950, p. 67).

Such a scheme may show: "orderings that are mandatory for instruction" (Johnson, 1967, p. 138); "major divisions, departments, courses" (Payne, 1969, p. 8); "unit topics, daily topics, specific examples" (Payne, 1969, p. 11) or arrangements of "objectives (Payne, 1969, p. 11).

Design Statements Related to Goals - Several statements found in the two reviewed documents support question 2a (How are the stated goals of the curriculum reflected in the statements giving direction to the design or organization of the curriculum?) of the criteria for making judgement.

The Ontario Ministry of Education laid out "a number of aims that are components of the (...) goals as well (as) a number of more specific learning opportunities that contribute to each of these aims" (PIJ1, 1975, p. 7). The aims and opportunities are organized by both integrated subject areas (Communications, the Arts, and Environmental Studies) and grade division (primary and junior). Responsibility for "the particular arrangement of objectives, content, and learning experiences" (PIJ1, 1975, p. 2) contributing to the established goals and aims is assigned to local school boards and schools by the Ministry. Direction for these arrangements comes from the influence of other values statements which are dealt with in succeeding sections of the present chapter.

Design Statement Related to Sources - Questions 2b of the criteria for making judgement was presented in Chapter II in the following way. "How are statements on content sources for the curriculum reflected in statements giving direction to the curriculum's design or organization?"

Responses to the question found in the reviewed documents support the question as a criterion for the critical evaluation of curriculum guidelines.

In its value position the Ministry stated that the source of the curriculum's content should be the "environment - people, things and symbols" (EPJD, 1975, p. 17). Resources from the environment are seen to have the potential "to serve several purposes and to reinforce one aspect of learning through another" (EPJD, 1975, p. 25). In this regard, the writers of the documents view the content sources as contributors to learning activities that cut across traditional subject boundaries. However, the disciplines are recognized as factors contributing to the perception of the environment as demonstrated by the recognition of language and mathematics being the major contributors to the integrated subject area of communications. Textbooks focussing on the contributing disciplines therefore are viewed as material resources that add to the content of the curriculum.

Design Statements Related to Nature of Learners - Design statements related to the nature of learners and found in the reviewed documents respond to questions 2c of the criteria for making judgement. These statements, summarized in the third chapter of this thesis, are linked through the various values statements on the nature of learners to the

ideology governing all curriculum decisions to be made according to the guideline. "Effective sequence" (Herrick and Tyler, 1950, p. 44) is seen by the writers of the reviewed guideline to take into account the general developmental characteristics of the learners for whom it is developed as well as the particular needs of certain individuals.

Two major concepts are presented in support of the writers' position on effective sequence. First, the curriculum should take learners through "experiences with concrete and real phenomena (...) (to) visual symbols (and then) towards abstractions" (EPJD, 1975, p. 12). (This sequence parallels the cognitive growth of the learners.) Second, the pace at which a child is taken through the curriculum should be adjusted to his needs in order to prevent "working on skills prematurely" (EPJD, 1975, p. 21) or forcing a child towards abstract reasoning when his reasoning ability "remains concrete (...) practical and confined" (EPJD, 1975, p. 12).

Design Statements Related to Learning Theory - From the stated values position on learning theory three directives for the design of the curriculum as found in the reviewed guideline, are summarized in Chapter III. These directives support question 2c of the criteria for making judgement. They respond to Herrick and Tyler's (1950) call for design statements that attend to vertical and horizontal sequence as well as "cumulative effect in curriculum learning" (p. 67) and "effective sequence" (p. 44). The guideline suggests: 1) that the "integration of learning activities allows different resources to serve several purposes and to reinforce one aspect of learning through another (EPJD,

1975, p. 25), 2) that "experiences that reinforce each other in learning should occur close together" (EPJD, 1975, p. 24), and 3) that "a prescribed sequence" (EPJD, 1975, p. 8) may not suit all learners.

Process Statements

As with the case of design statements gathered through the broad analysis step in the review of the documents, statements directing processes leading to the production and implementation of a curriculum were gathered using one question (question 3) as a criterion to identify such sentences and four other questions (3a, 3b, 3c, 3d) were used to classify those statements related to the various values positions taken by the writers. Similarly, the literature supporting the questions used in the identification and categorization processes is summarized in Chapter II and the findings are summarized in the third chapter of this study.

Two processes were identified as being essential to the development of a curriculum: "selection" (Johnson, 1967, p. 137, Beauchamp, 1975, p. 78) and "organization" (Beauchamp, 1975, p. 78). Organization of the curriculum should attend to categories such as "goals, objectives, activities, and materials" (Payne, 1969, p. 15) and besides making clear where conformity and autonomy are to be practised the supporting literature (Herrick and Tyler, 1950) suggests that those persons responsible for the various decisions should be identified in the guideline. Support for question 3 of the broad analysis step in the Analytical Model and questions 3a, 3b, 3c, and 3d of the criteria for making judgement was found in the guideline reviewed.

Statements Related to Goals - Summarized in Chapter III are statements from the reviewed documents that outline the various responsibilities of different decision-making levels in relationship to the Ministry. It is the task of The Ministry to outline the goals, aims and broad organization of a curriculum. Duties of local boards include the selection and adaptation of objectives and local resources to the needs of the children in their respective schools. Decision-making levels within local board jurisdictions include supervisory officials, principals and teachers. In the end, responsibility for the selection of materials and content used within particular learning experiences making up the curriculum falls to the classroom teachers. All levels of decision making are held responsible for ensuring that activities are consistent with the stated goals and for ensuring that such consistency can be demonstrated to the parents (and other citizens) who have a stake in the educational system of the province. The reviewed guideline outlines processes and responsibilities that demonstrate the generation of a curriculum proceeding from the four stated goals through broad aims and learning opportunities to the particular learning experiences had by the learners for whom the curriculum system exists.

Statements Related to Sources - In response to question 3c (How are statements on the content sources for the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?), it was found that the reviewed guideline directs a curriculum system in the production of guidelines and subsequent curriculum. Sources informing the production of a guideline were found to be parents, teachers, principals, supervisory officials, other interested citizens

and current research. The processes by which the pertinent information is to be selected include the use of "discussions, surveys and briefs" (EPJD, 1975, p. 3). Responsibility for organization of the information gathered into guidelines falls to a committee of the Ministry of Education.

Sources for a curriculum's content, as identified in the guideline at the values level, include the following components of the environment: "people, things and symbols" (EPJD, 1975, p. 17). Sources for the guideline are therefore consistent with sources for a curriculum. This is necessary for the guideline gives a broad outline of selected content.

Other statements in the guideline that support the criterion under discussion suggest that the teacher may include the pupils in the selection and organization of content at the classroom level in order to ensure consistency of the curriculum with pupil needs and interests. Furthermore, the guideline suggests teachers, in organizing the content and curriculum experiences of the pupils, should attempt to bring the pupils to an "awareness of the disciplines of knowledge, which are (...) patterns or ways of perceiving and organizing the environment" (EPJD, 1975, p. 20). Through these statements, the writers of the documents establish-a link between the stated values position on content sources and the traditional disciplines.

Falling in line with the assumption that the environment of the learners should provide much of the curriculum's content, the Ministry outlines, in its documents, the processes through which the various decision-making levels might proceed in order to ensure this position. These processes which direct the selection and organization of the content are summarized in the appropriate section of Chapter III of this

study. (See page 3 of PIJ1).

Statements Related to Nature of Learners - Statements which were found in the reviewed documents in support of question 3a of the criteria for making judgement are summarized in the preceding chapter. Fundamental to the beliefs expressed by the Ministry in its value position are the notions that: the development of children proceeds through stages from reliance on concrete experiences to an ability to deal with abstractions, individuals may differ from one another in rate of growth and ability to deal with abstractions, and certain kinds of learning activities enhance the normal growth and development of children. The writers of the reviewed documents outline the subsequent affect these beliefs should have on selection and organization processes in the development and implementation of curriculum.

In selecting content, the Ministry suggests that the decision makers should make choices that will be of interest to the learners, that are appropriate to the pupils' level of development, and that take into account differences between and among students. In organizing content, the writers suggest that the content should be sequenced and paced in such a way as to accommodate different rates of development as well as differences in ability. To aid teachers in both the selection and organization processes the Ministry directs them to observe children's work and make appropriate adjustments to group sizes and classroom activities in order to meet the needs of the individuals involved,

Statements Related to Learning Theory - Summarized in the preceding chapter are statements found in the reviewed documents that support question 3d of the criteria for making judgement. This question directs the reviewer of the documents to look for statements that are related to the value position on learning theory and give direction to the selection and organization of curriculum content.

Consistent with the stated value position on learning theory, the writers of the reviewed documents outline conditions appropriate to the promotion of skill learning, concept learning, and values learning. Focus is placed on selection of materials for the learning environment and organization of the learning environment in order to establish conditions necessary for the promotion of each of the kinds of learning about which theory statements are made. Within the context of statements made about promoting each type of learning, the topic of transfer is treated in a way consistent with the theoretical position selected by the writers of the guideline.

Evaluation Statements

The fourth question used to guide the broad analysis of the documents reviewed called for statements that give direction to the assessment of curriculum decisions. The purpose of such statements, according to Beauchamp (1975), is to support "continuous regeneration of curriculum decisions" (p. 82). Statements identified in the examined guideline tended to support the idea of Payne (1969) that "criteria for selecting and organizing subject matter and materials" should be included in such documents.

No support was found in the reviewed documents for either the notion that a guideline should provide criteria and procedures for evaluating pupil outcomes or the notion that a guideline should provide the ways and means "for the analysis and use of the results of evaluation" (Payne, 1969, p. 11). This does not necessarily rule out the possibility of such statements appearing in other guidelines. However, for such statements to appear in the reviewed guideline would have been inconsistent with the overall thrust of the documents whereby the ultimate or day-to-day curriculum decisions are left to individual classroom teachers. Teachers should base their decisions on the needs of the pupils with whom they are working. Support was found in the reviewed documents for sub questions 4a, 4b, 4c, and 4d subsequently the notions of Payne (1969) and Beauchamp (1975) on the topic of curriculum assessment.

Statements Related to Goals - Of the statements found in support of the fourth question used to guide the broad analysis a number were found to be directly related to the stated goals of the guideline reviewed. Three criteria for the assessment of selected content, three criteria to assess the objectives framed and one criterion for the planning and scheduling of learning activities are presented by the writers of the documents. These criteria as well as other statements directing the assessment of curriculum decisions (responses to questions 4b, 4c, and 4d) are recorded in the previous chapter.

Statements Related to Sources - Although it has been stated above that the reviewed guideline did not support the notion that such documents should provide the criteria for evaluating student learning, support is found for the idea that such criteria should exist. (In the case of

the guideline examined in the present study, responsibility for generating such criteria is assigned to the classroom teachers.) This criterion is expressed as part of the Criteria for Framing Objectives (Chapter III). Other evaluation criteria focussed on the concepts of structure and balance. (The concepts of structure and balance both spring from student need for development in all areas - cognitive, psychomotor and affective.) Responses to the criteria stated in the reviewed guideline support Johnson's (19767) notion that "empirical evidence (responses to the criteria) ... can identify structural errors and omissions in selection" (p. 139).

Statements Related to Nature of Learners - Five criteria for evaluating content selection decisions, one criterion for evaluating stated objectives, and one criterion for determining the pacing of learning are included in the guideline reviewed in this study. These criteria support the notion that the teacher should evaluate the curriculum prior to delivery of instruction (Beauchamp, 1975) for the purpose of providing feedback for decisions made. Like the evaluation statements related to sources, those related to the nature of learners focus on the developmental characteristics of children and thereby support Johnson (1967) in his call for "empirical evidence (to determine) structural errors and omissions" (p. 139). Similarly the criteria support Payne's (1969) idea that "criteria for selecting and organizing subject matter and criteria" (p. 11) should be present in a guideline.

Statements Related to Learning Theories - Five criteria for content selection, two criteria for framing objectives and one criterion for the scheduling of learning activities were found amongst the statements responding to the fourth question used in the broad analysis and in

support of question 4d of the criteria for making judgement. All of the criteria are consistent with the learning theory statements presented by the writers of the reviewed guideline. They stated that "the assumptions about children and learning outlined in Chapter II (...) define the criteria (...)".

Definitions of Key Terms

The fifth question directing the broad analysis of curriculum guidelines called for the definition of key terms used in statements responding to all other questions making up the Analytical Model. In support of this criterion, three key terms were given definitions in the reviewed documents. They are: 1) values, 2) content, and 3) curriculum. As suggested by Beauchamp (1975) and Payne (1959) the key terms that are defined aid in the clarification of the subject matter of the guideline and bring clarity and consistency to the statements giving direction to the development use and evaluation of a curriculum.

The Analytical Model and Other Curriculum Analysis Schemes

As noted in the second chapter of this thesis other curriculum analysis schemes do exist. However, they differ from that generated in the present study in a number of ways. First differences in purpose for the instruments are clear. Second, the schemes differ in starting points for their development. There are, however, similarities between other schemes and that presented in this study. In certain instances, criteria appearing in other schemes attend to some, but not all, of the phenomena treated by the questions appearing in the Analytical Model developed through this study.

Presented in the introductory section of this chapter is a question that may be directed to the present scheme and others to determine similarities

and differences between and among them: To what aspect of curriculum, as a field of study, does the present model attend in comparison with other analysis schemes? A response to this question follows. The response is treated under the topics of Purposes for Analytical Schemes, Differences in Starting Points, and Similarities and Differences in Criteria.

Purposes of Analytical Schemes

The purpose of this study was to produce an Analytical Model for the evaluation of curriculum guidelines. Guidelines, as defined in the first chapter, function as a set of principles and rules to be followed by persons working within a system as they generate, implement and evaluate curricula. Guidelines are not text-books, curriculum units, instructional kits or any such materials but they may direct the development, and implementation of these types of documents.

Unlike the instrument generated through the present study, that produced by Stevens and Morrisett (1968) was aimed at the analysis of curriculum materials and in particular materials produced to aid in social science curricula. Of their scheme they stated:

It does, however, include an exhaustive list of questions which any users of the system might ask of curriculum materials, and it organizes these questions within a carefully structured taxonomy. (p. 29)

The taxonomy of questions permits the user to compare and contrast curriculum materials in a way that enhances selections on the basis of criteria denoting good quality.

Tyler and Klein (1968, 1976) also focussed on the evaluation of curriculum materials. They wrote:

The purpose of this book is to contribute to a greater understanding of what constitutes quality materials. (...) It is our belief that if the criteria are used in making decisions about materials, the opportunity for improved performance by students will be enhanced. (Tyler and Klein, 1976, p. 7)

A third contributor to the field of curriculum analysis is Eash (1972) who, like the authors noted previously, addressed the problem of evaluating curriculum or instructional materials. In describing the problem that he addressed Eash reported:

The instrument grew out of an attempt to deal with the embarrassment of riches in instructional materials that are available to schools. There is a need to make selections from the cornucopia of materials and to implement them effectively in the classroom, for not only has the range of materials increased in this decade, but sophistication of the instructional design has advanced to the stage where change of instructional materials frequently entails extensive retraining of teachers. (p. 193)

The Eash scheme (1972) was designed to respond to two questions:

(1) What materials shall we select for use in the classroom? and (2) What are the characteristics of the instructional design of the materials, and what will it take to implement them effectively, given the demands of a particular program? (p. 193 - 194)

The analysis document developed by Stevens and Morrisett (1968), Tyler and Klein (1968, 1976) and Eash (1972) presuppose an established rationale or philosophy for a curriculum. Their purpose is to aid implementors of a curriculum in the selection of materials appropriate to their philosophy or rationale. In contrast, the analysis scheme presented in this study provides a means to disclose the meaning of documents directing the development of a curriculum and permits the user of the scheme to

to make judgements about the consistency and completeness of such guidelines. In all three cases (Stevens and Morrissett, 1968; Tyler and Klein, 1968, 1976, Eash, 1972) users of their instruments may employ opinions based on adopted philosophies as part of the standard for judging appropriateness of materials whereas the model presented in this thesis presents a firm set of standards for disclosing meaning and judging completeness and consistency.

A fourth curriculum analysis scheme to which the present one may be compared is the Sussex Scheme of Eraut, Goad and Smith (1975). The purpose of the Sussex Scheme is:

(...) to provide guidance for the analysis of a textbook or curriculum package which has a major effect on the rationale of the curriculum area concerned. (p. 85)

The authors continue with the following explanation of how the scheme may be used and by whom:

For those who are considering the purchase and use of the materials, the analysis is intended to provide evidence which will guide the decision to adopt, adapt or reject them. For those who are already using the materials, the analysis is a review which might lead to a better understanding and a change in the manner of their use. Two situations are envisaged:

- 1) A situation where one or more potential users conducts the analysis on his own account or on behalf of a group of fellow teachers.
- 2) A situation where an experienced analyst conducts the analysis on behalf of several groups of teachers.

In either case the purpose of the analysis is to present the evidence and not to prejudge the decision. (p. 85)

The Sussex Scheme, unlike the first three contrasted to that presented in this study, does not pre-suppose user adherence to a particular curriculum philosophy or rationale. The scheme discloses highlights or characteristics of material. The characteristics disclosed are those upon which the authors believe decisions of adoption, adaptation or rejection should be made. The degree of freedom permitted by the Sussex Scheme would appear congruent with the English curriculum system described in the first chapter of this thesis. A decentralized and diffused system, wherein autonomy for decision making is extended to local schools, would therefore benefit from the use of a scheme that focusses on disclosure and not evaluative criteria. Although the English system remains relatively free from a central controlling agency that imposes a particular curriculum philosophy or rationale philosophies do emerge in individual schools or school districts. The Sussex scheme would accommodate any number of philosophies and therefore would be complementary even to philosophies or rationales disclosed by the Analytical Model generated through the present study. The Sussex scheme and the one presented herein do not impose a philosophy or rationale. The present study presents questions to disclose philosophies or rationales while the Sussex scheme brings to light characteristics of curriculum materials that may or may not be judged appropriate to particular views of curriculum. To the extent that neither scheme imposes or presupposes a particular point of view about curriculum, they are alike. They differ however, by virtue of fact that one focusses on curriculum guidelines and the other focusses on curriculum materials.

A more recent system by Robinson (1978), unlike the analysis schemes mentioned above, did not focus on the evaluation or analysis of curriculum

materials for the purpose of making a value judgement about them. The function of the instrument was to permit the user "to examine explicit statements of aims and objectives with a view of determining trends over a twenty-five year period". (p. 27)

A preliminary study reported by Robinson (1978) and aimed at defining "the domain of the search for aims and objective statements" (p. 27) was conducted in order to facilitate the intent of the main study. The materials examined in both the main and preliminary studies were curriculum guidelines disseminated by the Province of Ontario over a twenty-five year period. It was the preliminary study, however, that took a more global perspective of guidelines for the purpose of clarifying their content.

The schema used in the preliminary study went beyond the restricted notion of examining aims and objectives to include a treatment of values positions and teacher activities at the classroom level. (Robinson, 1978, p. 27-51) The Robinson studies and model presented in this thesis are alike in that both have curriculum guidelines as their area of concern and both are aimed at disclosure of meaning. Although the preliminary study reported by Robinson includes a treatment of values and processes and, although the main thrust of Robinson's study was to look at trends in statements of aims and objectives over a twenty-five year period, he did not disclose the total thrust of the guidelines at hand. To do so would not have been consistent with his purpose. Disclosure of values and teacher processes was carried out by Robinson only to facilitate his main objective.

Differences in Starting Points

The curriculum analysis scheme generated by Stevens and Morrisett (1968)

represents a "synthesis" (p. 29) of ideas on; a) methods for "describing social science curriculum materials" (p. 28), b) "the entire setting and operations of information gathering, processing utilization" (p. 29), c) "the concept of an assignable unit (p. 29), d) the interaction between values and rationales.

Three factors make the starting points of the Stevens and Morrisett system different from that presented in this study. First the Stevens and Morrisett instrument relied, in part, on existing criteria for judging social science curriculum materials. Second, their scheme had as its focus curriculum materials and not curriculum guidelines thereby directing the selection of starting points to writers treating such topics. The third factor is related to the date of their publication, 1968. Unlike the present study, theirs did not benefit from a more extensive treatment of related topics in the literature on curriculum. It must be noted, however, that Stevens and Morrisett did demonstrate interest in finding appropriate literature on analysis procedures and curriculum rationales (i.e. Stake, 1967; Berlak and Shaver, 1968). The references used by Tyler and Klein (1968), 1976) listed below reflect a major difference in the purpose of their scheme from that presented in this study.

1. American Psychological Association, Joint Committee on Test Standards, APA, AERA-NCME. Standards for Educational and Psychological Tests and Manuals, Washington, D.C.: APA, 1966, 1974.
2. Division of Audiovisual Instructional Service, N.E.A., Joint Committee on Programmed Instruction and Teaching Machines. Recommendations for Reporting the Effectiveness of Programed Instruction Materials. Washington, D.C.: 1966.
4. Joint Committee of the National Education Association and the American Textbook Publishers Institute. Guidelines for Textbook Selection. Washington, D.C.: 1967. (Revised edition)

4. Joint Committee of the National Education Association and the American Textbook Publishers' Institute, Guidelines for an Adequate Investment in Instructional Materials. Washington, D.C.: 1967.

Their purpose was to evaluate readi-made curriculum materials. They did not set out to evaluate guidelines for generating curricula. Their product more closely resembles a mix of a guideline and a scheme for evaluating such documents. The fact that Tyler and Klein did not include a review of literature on curriculum theory criteria may explain why their scheme approximates an instrument for evaluating guidelines but falls short of the mark. It is curtailed by the facts that it does not call for a specification of decision makers and it imposes the idea that "an evaluation package should be built in" (Tyler and Klein, 1976, p. 35) to direct the evaluation of student learning. The Tyler and Klein recommendations approximates a guideline evaluation instrument, however, because it permits a range of value positions to emerge as starting points for the generation of curricula.

Eash (1972) did not make clear his starting points by direct reference to particular writers. He simply stated:

Through eliciting data on essential constructs generally accepted as central to micro and macro designs of curriculum, the instrument serves to illuminate the instructional design potentialities of a range of instructional materials. (p. 194)

The result (an implied synthesis of ideas) is a unique combination of a) questions that facilitate disclosure of meaning and b) evaluation scales that impose the values of the author. The model presented in this thesis attempts to avoid bias by incorporating general principles of content analysis and generalizations from writings treating curriculum theory

criteria as starting points. The proponents of the Sussex Scheme (Eraut, Goad and Smith, 1975) are very explicit about their starting points. Relying heavily on the work of Mann (1969) and Scriven (1967) who extend the concept of content analysis to curriculum criticism and Stake (1967, 1969) who produced a scheme for organizing educational program evaluation data, Eraut, Goad and Smith developed an instrument for analysing curriculum materials. They also drew "upon the experience of other countries in the field of curriculum". (p. 1) Although the Eraut, Goad and Smith paper includes a comparative analysis of seven instruments including the Sussex Scheme, the authors do not specify whether or not they made direct use of the other six in generating their own. One is left to conclude that the authors of the Sussex Scheme, did use literature on content analysis as a starting point in a similar way to that used in the present study. They did not, however, include writings on "curriculum theory" (p. 23) as a source contributing to their design.

Like the Eash study (1972), Robinson's (1978) does not make explicit the starting points for the development of his instrument. He does include, however, a detailed account of its historical development and one may conclude that Robinson and his colleagues were breaking new ground. In contrast the scheme presented in this study represents a synthesis of concepts from the literature on theory in general, curriculum theory criteria, and content analysis.

Conclusions that can be drawn from a comparison of five curriculum analysis schemes with that presented in this thesis are:

1. None of the other five schemes focusses on curriculum guidelines exclusively.

2. Only the scheme presented in this study uses concepts from the literature on curriculum theory criteria and content analysis as starting points for its design.

Whether or not any one of the other five schemes may perform the role assigned to the present scheme or visa versa is a question that can only be answered by examining similarities and differences amongst the criteria (questions) making up each scheme.

Similarities and Differences in Criteria

The Analytical Model generated through the present study contains five general categories of criteria as represented by the five broad questions. They are, criteria related to values, criteria related to design, criteria related to evaluation and criteria calling for the operational definition of key terms. Using the five categories as a general frame of reference the other analytical schemes mentioned above are examined for similarities and differences amongst them and the instrument presented in this study. The information on similarities and differences emerging from a comparative look at the schemes in question is summarized in the following chart (Figure 4). Criteria appearing in schemes other than that generated in this study are presented and discussed outside the context of the chart.

Present Study (1981)	Other Studies				
	Robinson (Preliminary Study) (1978)	Sussex Scheme (1975)	Eash (1972)	Tyler and Klein (1976)	Stevens and Morrisett (1968)
Criteria Related to Values	E	L	E	L	L
Criteria Related to Design	L	E	E	L	L
Criteria Related to Processes	E	E	E	E	E
Criteria Related to Evaluation	L	E	E	E	E
Criteria Related to Key Terms	N	N	N	N	N

E = Extensive Treatment

L = Limited Treatment

N = No Treatment

Figure 4

Comparison of Criteria in Six
Curriculum Analysis Schemes

Treatment of the various criteria categories by Robinson (1978) clearly reflect the purpose of the preliminary study; namely, to gain contextual information for an examination of trends in the treatment of goals and objectives. His criteria require the reader of guidelines to identify statements related to the sources of objectives and statements directing teacher activities in the treatment of objectives. Robinson did look for consistency between these two categories of statements. The fact that Robinson gave extensive consideration to the two categories mentioned and looked for logical consistency in the statements appearing across the categories demonstrates a similarity between his scheme and that presented in this thesis. Where the criteria generated in the two studies differ is in the scope of the items appearing in the category related to processes. Robinson's study places its focus entirely on the classroom teacher or guideline implementor. The scheme presented through this study calls for a treatment of any and all levels of curriculum decision making in the process of implementing guidelines.

As stated earlier, the instrument developed by Robinson (1978) differs in purpose from that generated in this thesis. An examination of the criteria in the Robinson scheme adds nothing new for consideration as criteria for assessing curriculum guidelines. Due to its limited treatment of certain categories it cannot be considered as a viable alternative to that presented in this study.

The Sussex Scheme of Eraut, Goad and Smith (1975) makes the assumption that those employing the instrument are in a position to select or reject particular curriculum materials. Part of the selection process, as indicated in their criteria, is to determine whether or not the materials under review

are congruent with the values held by the reviewer(s). As a result, the values category of criteria requires little more from the analyst than an identification of the "author's rationale" (p. 104). Again, because of a difference in purpose, the criteria in the Sussex Scheme vary from those generated through this study. The Sussex scheme assumes that the reviewer holds the values that will guide the curriculum decisions. The model presented in this thesis calls for an explication of a values system that will shape a curriculum. Aside from the fact that the values category criteria differ between the two approaches and that the Eraut, Goad and Smith instrument does not call for the definition of key terms through their criteria, the two instruments are similar. The criteria appearing in the remaining categories are complimentary and both schemes call for disclosure of information before judgements are made about it.

Information appearing in Figure 4 regarding the Eash instrument (1972) is somewhat misleading. With the exception of the category dealing with key terms, Eash gives a fairly extensive and balanced treatment of the other classes of criteria. All of his criteria demonstrate a bias. Evident is the fact that Eash prefers a "task analysis" (p. 199) approach to the organization of curriculum content and he imposes this value position on the user of the instrument. The study at hand, which builds criteria from attributes of curriculum theory, does not impose a particular organizational scheme or approach to evaluation.

Tyler and Klein's (1976) work demonstrates a particular point of view about curriculum content, organization and evaluation. That point of view is behaviouristic to the extent that the authors suggest that the content should be expressed in and organized around behavioural objectives.

Although most of the criteria found in the Tyler and Klein format appear to fall into the process and evaluation categories, it is understandable given the purpose stated for the instrument. It is clear that the authors want the user of the instrument to have an understanding of teacher role in organizing the learning and evaluating pupil progress in ways consistent with stated values. This notion appears congruent with the ideas expressed in this study. They differ, however, by virtue of the fact that the present scheme would accommodate the bias of Tyler and Klein but their recommendations would not accommodate a more laissez-faire philosophy of curriculum. To that end, the model presented in this study is more flexible than that of Tyler and Klein.

The focus of the criteria appearing in the instrument presented by Stevens and Morrissett (1968) is on teacher roles in the processes of presenting the content of curriculum materials and evaluating its effect on student learning. As noted earlier, their scheme's intent is to direct the evaluation of curriculum materials so that users of such materials may judge the congruence of such documents with an accepted rationale and determine whether or not the materials can or should be employed. The Stevens and Morrissett instrument therefore calls for the disclosure of the rationale or values position held by the writers of such materials and provides criteria to determine whether or not the materials contain clear directives.

A major weakness in the criteria of the Stevens and Morrissett (1968) system as a scheme for assessing either curriculum guidelines or curriculum materials is that they do not directly call upon writers of such documents to give operational definitions to key terms. A second

problem that may emerge, if their scheme is used to assess general curriculum guidelines or materials for subject areas outside the social sciences, is the fact that their scheme does not accommodate psycho-motor learning. To this extent, the Stevens and Morrissett instrument is restrictive in comparison to the instrument presented in this study.

Although all five of the schemes compared to the one generated through this study lack specific criteria calling for the operational definition of key terms the writers are careful to define the terms used in their own schemes. Whether or not such definitions are called for in an implicit way can only be determined by comparisons of findings between and among users of each instrument. The model presented in this study requires explicit definitions of key terms so that users of the scheme will derive the same understanding from documents under review.

Two similar sets of criteria appear in the Sussex Scheme (1975) and the Stevens and Morrissett Scheme (1968) that do not fit any one of the categories of criteria (questions) making up the Analytical Model generated through this present study. These criteria call for the description of the physical organization of documents under review and suggest that certain bits of information about the author, publisher, form, style, subject, size and cost of documents are necessary. Indeed this kind of information may be necessary to a written report following analysis and may be necessary for the selection of curriculum materials. These criteria, however, would not enhance the model presented in this thesis as an instrument for analysing curriculum guidelines.

In summary, it is concluded that the Analytical Model presented in this study has greater potential for use than any one of the other analysis

schemes examined. It gains its potential through its starting points which are less restrictive and freer of bias than the starting points employed in the other schemes. The Analytical Model, in fact, may be used to disclose the highlights of curriculum materials other than guidelines. A positive aspect of the other analysis schemes is their potential to augment the instrument generated in this study. Curriculum materials, generated from guidelines whose meaning has been disclosed by use of the Analytical Model, may be evaluated by other instruments to aid in the materials and content selection process.

Implications of the Analytical Model for Curriculum Development and Implementation

Guideline Users

The primary target population for use of the model developed in this thesis was the classroom teacher. The problem context outlined in the first chapter demonstrated that classroom teachers were not making use of curriculum guidelines issued by a central agency as a strong source of influence on decision-making. The initial intent of the Analytical Model developed in this study was to provide teachers with a set of questions and procedures to conduct an analysis of guidelines so that their (the guideline's) directives would be more clearly understood. Sources of the model (literature of curriculum theory criteria and content analysis) helped to establish a concept of a complete guideline. As a result, the model allows users of it to identify gaps in guidelines and encourages them to seek further information from those charged with disseminating such documents.

In some curriculum systems, such as the Province of Ontario, the users of curriculum guidelines are not just classroom teachers; decision making is assigned to a number of levels or different groups of persons. Curriculum workers, at any level of decision making (i.e. grade division, school staff, board-level committee), may use the Analytical Model to:

- a) gain an appreciation of the values guiding decisions within the system,
- b) identify the kinds of decisions assigned to their group and, c) get a grasp of the decisions assigned to levels above and below them.

Where guidelines are public documents, the Analytical Model may be used by interested persons who are not in the mainstream of decision making to disclose positions taken by the writers for juxtaposition with their own. To use the model in this way would permit interest groups within the public to clearly identify and focus upon educational issues. In particular, issues related to values, that either influence decision making or are presented as part of a curriculum's content, can be identified and examined in a more open fashion when those contained within guidelines are disclosed in a non-biased way.

In-service and pre-service teacher education programs frequently form part of the scheme for implementing curriculum guidelines in systems where such documents are used to direct the development of curricula at the local level. Faculties of education and professional teacher groups sponsor workshops and courses to aid prospective or practising teachers in acquiring an understanding of guidelines and or the skills necessary to develop and implement curricula that are congruent with the guidelines. The Analytical Model developed in this study can now be used as the organizing

centre for courses and workshops where disclosure of meaning should be the important feature.

Frequently, as pointed out in the introductory chapter of this thesis, the philosophy of curriculum systems change. Where change is disseminated through new versions of guidelines, decision makers at all levels within systems are faced with the problem of identifying what the changes are and the implications the changes have for practice. The Analytical Model, therefore, can supply the questions and procedures one might require to analyse the documents issued before and after the change in order to identify substantive redirection of decision making.

Finally, graduate students and researchers may find the Analytical Model presented in this thesis of tool value to carry out comparative analyses of curriculum guidelines issued by various agencies or governments. In particular, the model would allow the researcher to isolate aspects of a number of curriculum systems for the purpose of juxtaposition, comparison to one another and judgement of guideline completeness.

Guideline Development

With the isolation of essential categories of statements making up a curriculum guideline a manual may now be developed to offer directions to persons engaged in the task of generating such documents (curriculum guidelines). The manual should make explicit all terms and concepts contributing to the questions and procedures of the Analytical model. Readers of the manual should be directed to generate written responses to the questions in the model starting with question 1 of the broad questions. Following a response to this question, writers of guidelines should proceed, in turn, to each succeeding broad question and its accompanying sub-questions.

Finally, a manual for curriculum guideline development should direct those involved in the enterprise to make explicit the organizational rationale of their product.

Implications of Findings for the Ontario Guideline

Although the purpose of the study at hand was not to seek improvements for the reviewed guideline implications for improvement grew out of the process. The fact that certain criticisms can now be directed to the guideline used in the test of the Analytical Model demonstrates that interaction between the model and the guideline took place during the test stage of the study and not during the development of the criteria and procedures making up the Analytical Model.

The first criticism that can be directed to the guideline is that it does not appear as a comprehensive whole in a single document. This may well be the major reason why the documents are not used as a major resource by teachers working in the Ontario system.

A second criticism of the guideline is that its writers failed to give operational definitions to certain key terms. They are "learning opportunity" and "experience". The reader is left to deduce the meaning of these terms from the context of statements making up the documents.

Thirdly, the writers of the documents do not provide criteria and/or procedures for assessing the quality of learning experiences had by the pupils through the curriculum. Given the operational definition assigned to the term curriculum by the guideline's authors, it would appear appropriate to include such criteria and/or procedures.

Finally, the writers of the documents did not include sources for the theories accepted as value positions or starting points for the

development of the guideline. The reader left with somewhat synoptic statements from which theoretical understandings must be derived.

Implications of the criticisms are that the guideline would benefit from being placed within one document; the guideline should be rewritten to include operational definitions of "learning opportunity" and "experience" as well as criteria and/or procedures for assessing learning experiences; and the guideline should include identification of theoretical sources so that its users can extend their understanding of such theories.

Implications of Findings for Future Studies

Three possible future studies should be considered. First, in delimiting the study at hand, it was pointed out that the Analytical Model was tested through its application to one curriculum guideline by one person. With the model now revised (Appendix D) it is ready for further testing. The model may be examined by having several evaluators apply it to the same guideline used in the present study or another guideline to determine whether or not the stated questions and procedures convey the same meaning to all evaluators.

Second, the application of the model to a wide range of guidelines, both system wide and subject specific, would provide data that could either verify the questions developed in this thesis or would provide data that suggest modifications to the questions.

The third possible study growing out of this thesis involves the use of the Analytical Model as an instrument to assess curriculum materials other than guidelines. The results of the model's use in this way could be compared to results gathered from applying one or more of the other curriculum

analysis schemes highlighted previously in this chapter. Purpose of the comparison would be to make a judgement about the Analytical Model's value as an instrument to assess other curriculum materials (i.e. texts, units, program kits).

Summary

The Analytical Model, developed through a synthesis of concepts emerging from a review of the pertinent literature on curriculum theory criteria and content analysis, was tested to an Ontario curriculum guideline. The model, made up of questions and procedures, found support from the guideline (as reported in Chapter III) inasmuch as the guideline contained statements that endorsed the questions in the model. Analysis of the supporting statements showed congruence with the literature contributing to the development of the model.

The result of the study (the development of an Analytical Model to direct the evaluation of curriculum guidelines) makes a contribution to curriculum as a field of study. The Analytical Model produced through the study is unlike other curriculum analysis schemes. It has a different purpose and it was generated from different starting points. The model presented in this thesis is more comprehensive because of its congruence with concepts of curriculum theory. Its comprehensiveness is reflected in the range and number of categories of questions making up the scheme in comparison to others. (Some difficulty was experienced in making discriminations between statements dealing with the nature of the learner and statements dealing with learning theory. As a result, a slight modification of the model was suggested. The revised model is found in

Appendix D.) It was concluded that other schemes could not serve as well as the present model in the analysis of guidelines. A future study, however, could be the test of the Analytical Model as a scheme for analyzing curriculum materials other than guidelines and comparing results from the application of other instruments.

Other future studies suggested include the application of the model by a number of different guidelines to confirm its comprehensiveness.

Chapter V

SUMMARY

It is the intention of curriculum guidelines to direct curriculum makers in generating, implementing and evaluating curriculum. In decentralized curriculum systems, through guidelines issued by the central authority, autonomy in decision-making is extended to curriculum makers at the local level. Those guidelines are frequently ignored or given a lower status among sources influencing decision-making. The task of generating curriculum in decentralized and somewhat profuse curriculum systems frequently falls to the teachers in schools who rely more on past practices than the guidelines themselves.

Variables that contribute to the low status of curriculum guidelines are the structures of decentralized systems, the history of systems in curriculum making, and the lack of ways and means to analyse curriculum guidelines in a way that illuminates their directions. These variables are interrelated. Ontario, as a case in point, is decentralized and somewhat profuse in-so-much as a great deal of autonomy is given to local school boards. At the same time the Ministry exercises little control over these local jurisdictions. Ontario is also a system that has a history of change from central control (wherein curricula or courses of study were issued by the central authority) to a decentralization (where autonomy in many curriculum matters is given to local boards through the issuance of curriculum guidelines). In disseminating guidelines, the Ministry has not made efforts to enhance user understanding of them outside of issuing non-policy suggestions. Criteria and procedures for examining guidelines are notably absent in the efforts of the Ontario Ministry of

Education and the literature on curriculum guidelines.

This study was an attempt to move toward a set of questions and procedures (an Analytical Model) for the evaluation of curriculum guidelines. The purpose of curriculum guideline evaluation, through an analytical model, is to illuminate the directives contained within them and thereby help teachers and others to see their roles within the system. In particular, the evaluation of a guideline through such a model should bring to light the kinds of decisions assigned to the various levels within a system as well as the sources that should influence those decisions.

The study moved through two major phases. First, a set of criteria and procedures for the evaluation of curriculum guidelines were generated from a review of literature. Based on the assumption that curriculum theories and curriculum guidelines attend to the same phenomena literature on curriculum theory criteria was reviewed in order to generate the criteria used in the study. Assuming that the consistent application of criteria (questions) to a written document is a form of content analysis, literature from that field was reviewed to determine appropriate procedures for applying the questions. (The criteria and procedures in combination make up an Analytical Model). The second phase of the study was a test of the model (questions and procedures). The test consisted of an application of the questions from the model to an Ontario curriculum guideline in order to determine whether or not statements in the guideline supported the questions and the literature contributing to their formation.

Through a review of the literature on curriculum theory five areas of agreement were found among authors contributing to the field.

They are:

1. A curriculum theory should make clear the value positions and sources upon which a curriculum should be built.
2. A curriculum theory should specify characteristics of a curriculum design.
3. A curriculum theory should describe essential processes for making curriculum decisions and the interrelationships among those processes.
4. A curriculum theory should provide guidelines for continuous evaluation of curriculum decisions.
5. A curriculum theory should include definitions of its key terms.

These five statements, supported by the literature from which they were derived, were used to generate five questions to be applied to curriculum guidelines. Furthermore, the first four criteria formed the axes of a model through which a second, more refined set of sub questions were generated. The sub questions were used to examine statements extracted from the reviewed documents through application of the first four questions.

Procedures used in the application of the questions, as stated earlier, came from a review of literature on content analysis. The first step employed was to direct the five broad questions to the reviewed documents in order to identify those statements supporting the general attributes of a curriculum guideline.

The second step in the procedure was to examine the statements, identified in the reviewed documents through the first step by directing to them a set of twelve sub questions generated from the first four. Statements found in response to the second set of criteria required that they be logically consistent with one another and the first four criteria.

The five criteria used in the first step, or broad analysis, are:

1. What value positions did the writers take as reflected in:
 - a) statements of ideology, b) statements of general goals for a curriculum,
 - c) statements identifying sources for a curriculum's content, d) statements identifying beliefs about the nature of learners for whom the curriculum should be designed, and e) statements identifying learning theories that should influence curriculum decisions?
2. What statements did the writers of the documents make to give direction to the design or organization of the curriculum content?
3. What statements did the writers of the documents make in order to give direction to the development of the curriculum and use of the curriculum?
4. What statements did the writers of the documents make in order to give direction to the assessment of curriculum decisions?
5. What definitions were given to terms used in statements responding to the first four questions directed to the broad analysis?

The second set of criteria used for making judgements about the statements extracted from documents by the first set of questions are:

- 2.a. How are the stated goals of the curriculum reflected in statements giving direction to the design or organization of the curriculum?
- b. How are statements on content sources for the curriculum reflected in statements giving direction to the curriculum's design or organization?
- c. How are statements on the accepted view of the nature of learners reflected in the statements giving direction to the design or organization of the curriculum?
- d. How are statements indicating the accepted theories of learning reflected in statements on the design or organization of the curriculum?
- 3.a. How are the stated goals of the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?
- b. How are statements on the content sources for the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?
- c. How are statements on the accepted views of the nature of learners reflected in statements giving direction to the processes for the development and use of the curriculum?
- d. How are statements indicating the accepted theories of learning reflected in statements giving direction to the processes for the development and use of the curriculum?
- 4. a. How are the stated goals of the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?

- b. How are the statements on the content sources for the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
- c. How are the statements on the accepted views of the nature of learners reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
- d. How are the statements indicating the accepted theories of learning reflected in statements giving directions to or criteria for the evaluation of curriculum decisions?

Findings of the study demonstrated that questions in the Analytical Model, developed from the literature on curriculum theory, found supporting statements in the reviewed guideline. No questions were left without support and no statements were found in the guideline to suggest that the questions were not broad enough to cover all important attributes of a curriculum guideline.

An analysis of the findings found support for the literature contributing to the formation of each of the questions in the model. Some difficulty, however, was found in making discriminations between statements dealing with the nature of learners and statements dealing with learning theory. The implication of this finding is that the model should be revised so that all questions dealing with these two concepts be combined.

Implications of the analysis of findings include: the notions that: a) the Analytical Model has greater scope for evaluating curriculum guidelines than other curriculum analysis schemes, b) the model can be used to help in the generation of other documents to aid guideline writers

as well as guideline users, and c) the model can be used as an instrument to aid in the comparative analysis of curriculum guidelines and systems.

Future studies growing out of this thesis could involve: a) further testing of the model by having a number of evaluators apply it to the same guideline to determine whether or not the questions convey the same meaning to all users, b) further testing of the questions in the model by applying it to a number of different guidelines in order to confirm their (the questions) validity, and c) testing the model as an instrument for evaluating curriculum materials other than guidelines.

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APPENDIX A

Table 1

Rank Order of Items That Influence
the Curriculum Decisions of Teachers

Strong Influences

<u>Rank</u>	<u>Index Score</u>	<u>Item</u>
1.	2.723	12. Your past experiences (what you have found "works").
2.	2.600	2. Awareness that students will experience satisfaction or pleasure, or their special needs or interests will be met, with certain alternatives.
3.	2.265	14. Your attitudes, special interests, philosophies.
4.	2.111	22. Students.

Medium Influences

5.	1.985	13. Your image of what a teacher ought to be, or do.
6.	1.978	21. System guidelines.
7.	1.950	5. The availability of resources (or money for certain resources).
8.	1.938	8. Trends or events in the world the student will graduate into (e.g., unemployment, automation).
9.	1.908	6. The kind of information that can be picked up from lectures, books, magazines.
10.	1.829	19. Test results, or norms that students are expected to match.
11.	1.829	22. Fellow teachers within own school or system.
12.	1.822	18. Published textbooks.
13.	1.744	20. Ministry guidelines.
14.	1.581	15. System professional development sessions and/or mini-courses.
15.	1.518	3. Awareness that student esteem or affection is connected with an alternative or alternatives.
16.	1.472	22. Department heads.
17.	1.466	10. Educational trends (e.g., "back to basics," "open concept", etc.)
18.	1.457	22. Resource staff.
19.	1.429	17. Ministry courses.

Table 1 continued

<u>Rank</u>	<u>Index Score</u>	<u>Item</u>
20.	1.321	7. The things that parents are saying or the local newspaper is reporting.
21.	1.285	22. Principals.
22.	1.192	16. External courses (e.g., OISE, University)
23.	1.125	11. Research findings or projects receiving funding.

Weak Influences

24.	.996	22. Vice-principals.
25.	.935	22. Superintendents.
26.	.846	22. Fellow teacher from other systems.
27.	.932	4. Awareness that people who do certain things, get hired or promoted (or the opposite).
28.	.820	1. Awareness that acclaim from or increased status among colleagues is connected with an alternative or alternatives.
29.	.819	22. Parents.
30.	.742	9. Pressure or protest groups demanding change in the schools (e.g., the women's movement, religious groups).

The relative priority assigned to each item in the instrument by the sample as a whole was consistently maintained when the responses of selected groups were examined.

Appendix B

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APPENDIX C



Ministry
of
Education

Issued under the authority
of the Minister of Education
Hon. Thomas F. Wells

1978

Circular P111
Provincial Curriculum Policy for
the Primary and Junior Divisions
of the Public and Separate Schools
of Ontario

The Formative Years





As a government statement of curriculum policy for the Primary and Junior Divisions of Ontario elementary schools, this document represents a departure from its predecessors in a number of ways:

By summarizing provincial goals and curriculum expectations in a succinct manner, as is done here, we hope that all teachers, administrators, trustees and parents will find it easier to keep overall objectives in clear perspective, remembering always that the individual child in the classroom is the ultimate reason for the existence of our schools.

Another departure of major significance is the new policy of the Ministry of Education which will mean that this basic policy document will be backed up and supported by a variety of publications intended primarily for teachers as they work out the application of the curriculum in the classroom.

In addition to elaborating on the expectations outlined here, most of these supplemental publications will contain practical information and ideas that can be put to use in the classroom.

A book entitled *Education in the Primary and Junior Divisions*, which will provide a philosophical basis for the program in these divisions, will also be published.

Many have expressed concern about the teaching of basic skills in our schools. While it has always been accepted that a firm foundation must be established in the early years of a child's education, we must recognize the expressed concerns and react appropriately to them. In this document, the matter of basic skills has been addressed in a responsible and educationally sound manner.

As always, the major challenge falls to educators at the local level to translate the objectives into relevant learning experiences for each of our children.

Thomas L. Wells

Thomas L. Wells
Minister of Education

Ontario's Approach to Curriculum

However spontaneous it may appear, good education requires careful planning. Planning may be formal or informal, conducted in groups or by individuals, deliberate or intuitive, continuous or intermittent, or some combination of all of these.

But whatever the method, planning implies purpose and a careful correlation between means and end. The end result is curriculum, the particular arrangement of objectives, content, and learning experiences within the school.

As part of its province-wide responsibility, the Ministry of Education establishes a common framework of goals and aims for education in Ontario, and sets out in a general way the learning opportunities that the programs in the schools should make available. For the Primary and Junior Divisions of our elementary schools, these provisions are embodied in this document, known as *Circular P111*.

This policy of issuing guidelines rather than detailed courses of study acknowledges that, to be effective, curriculum must be closely related to the characteristics and needs of the particular pupils for whom it is planned.

Thus, while the Ministry articulates the broad goals, it is the responsibility of the local school boards—through their supervisory officials—to formulate local programs that are within the rationale of the provincial policy and at the same time reflect local needs and priorities.

School staffs, both as individual teachers and as a collective body under the leadership of the principal, have the task of planning classroom programs specifically adapted to the children for whom they are responsible.

Curriculum planning is a process that must be widely shared. Working within the boundaries of provincially and locally established purposes and priorities, those most aware of the children's needs and the community's expectations—parents, teachers, principals, supervisory officials, as well as the children themselves—must all be involved in the planning process in appropriate ways. Local supervisory officials and principals have particular responsibility for providing leadership in planning, and for ensuring that specific objectives and the means used to achieve them are consistent with overall purposes and priorities.

Not every profitable learning opportunity can be planned in advance, but the overall direction of learning can and should be. Parents and other citizens have the

reasonable expectation that the professional educator will have a clear understanding of overall purposes, and of how the various activities planned for children fulfil these purposes

In many jurisdictions, committees define aims and set priorities in terms of community expectations. They identify local resources, refine perceptions that might affect the general sequencing of instruction, and provide, as temporary assistance for less experienced teachers, more or less detailed outlines of work and sample units

However extensive this assistance, the major responsibility for planning curriculum rests with the school. Only by accepting this responsibility can it respond to the special needs and characteristics of the children in its care, and work towards achieving the aims of the school and the school system

Much of the necessary planning (and in some situations almost all of it especially in relation to day-to-day activities) must be done by the individual teacher. Certain important parts of the planning process are, however, best done co-operatively, in some cases by the entire teaching staff, in other cases by all the teachers of a given division

Individual teachers have the responsibility of selecting strategies, resources, and activities appropriate to the needs of individual children, who should then be involved in setting short-term objectives, in devising ways and means of accomplishing tasks, and in choosing activities

Teachers planning by division can articulate objectives for that division and share resources and strategies for achieving them. They should strive to achieve a consistent focus and to eliminate excessive repetition and overlap

In planning sessions attended by the entire teaching staff of a school, teachers can share ideas and reach consensus on the objectives for each division and on the ways in which they contribute to the overall aims of the school. They can gain a unified sense of direction and a better understanding of the levels of expectations for children of various age groups. In so doing, they will be able to develop a more consistent program with concomitant opportunities for each child to advance at his own rate

The more communication and sharing take place, the more relevant will be the information available to the classroom teacher, who in the end must make the day-to-day decisions that guide the direction of learning

The Formative Years

Education in the Primary and Junior years, both in the home and in the school is of paramount importance. The experiences of these early years mould the child's attitudes to learning and provide the basic skills and impetus for his continuing progress.

In setting out the fundamentals of the program for the Primary and Junior Divisions of the elementary schools of Ontario, recognition has been given to the following important factors:

- the philosophical commitment of our society to the worth of the individual;
- significant research conducted in Canada and abroad;
- the recommendations and viewpoints contributed by teachers, parents, trustees, administrators, and other citizens of this province through the cyclic review process.

It is the policy of the Government of Ontario that every child have the opportunity to develop as completely as possible in the direction of his or her talents and needs. On behalf of the educational community and other citizens, the Government pledges to support an education that develops basic skills, knowledge, and attitudes, that endeavours to provide a fuller life during a child's years in the Primary and Junior Divisions, and that endeavours to nurture every child's growth so that each may be able to continue his or her education with satisfaction and may share in the life of the community with competence, integrity, and joy.

It follows that the curriculum will provide opportunities for each child (to the limit of his or her potential)

- to acquire the basic skills fundamental to his or her continuing education;
- to develop and maintain confidence and a sense of self-worth;
- to gain the knowledge and acquire the attitudes that he or she needs for active participation in Canadian society;
- to develop the moral and aesthetic sensitivity necessary for a complete and responsible life.

It is also the policy of the Government of Ontario that education in the Primary and Junior Divisions be conducted so that each child may have the opportunity to develop abilities and aspirations without the limitations imposed by sex-role stereotypes.

To achieve these goals the Ministry of Education holds certain expectations regarding the nature of the programs in the Primary and Junior Divisions and the related responsibilities of teachers, principals and supervisory officials. The responsibilities include

- (1) planning and implementing programs consistent with the goals and expectations of the Ministry of Education,
- (2) assessing each child's learning on a continuous basis to ensure learning at a level and rate that are in keeping with individual abilities and, where warranted, diagnosing difficulties and making appropriate changes in the program or teaching-learning strategies,
- (3) ensuring that each child experiences a measure of success in his or her endeavours so that each may develop the self-confidence needed for further learning,
- (4) organizing space and facilities and providing resources that allow scope for imaginative and varied activities,
- (5) communicating with parents concerning each child's progress

Programs developed at the local level should provide each child with opportunities to achieve the levels of competence and the forms of growth and development implied in the aims that follow. Such programs should allow individual children to move beyond the expectations of the program without subjecting those who cannot reach them to loss of self esteem or confidence. The programs should also accommodate any modifications that may be necessary to meet the needs of children with learning or other disabilities.

Aims related to Communications (language and mathematics) have been set out separately for each division and may be found on pages 6 to 16. Aims related to the Arts and to Environmental Studies are not allocated to particular divisions and are outlined on pages 17 to 23. The sequence in which the aims are listed in the document does not imply an order of priority.

Listed under each aim are a number of more specific learning opportunities that contribute to the major aim.

Primary Division

By the end of the Primary Division, the program should have provided the child with the opportunity to acquire competence in the areas outlined below.

Learning experiences in the Primary Division will enable the child to:

Arithmetic

1. Understand and use numbers and operations

- classify, order, and match objects in a collection, including structural materials such as rods, blocks, and interlocking cubes,
 - count, group, and use notation for recording,
 - master number facts related to addition, subtraction, multiplication, and division of whole numbers which are relevant to his or her experience,
 - recognize and use patterns such as $5 + 9$, $15 + 9$, $25 + 9$, $85 + 9$, $5 + 7$, $15 + 7$, $5 + 17$, $3 + 4 = 4 + 3$, $5 \times 9 = 9 \times 5$ (commutative property), $2 + (3 + 4) = (2 + 3) + 4$, $3 \times (4 \times 5) = (3 \times 4) \times 5$ (associative property),
 - acquire an understanding of the concepts of simple fractions (including equivalent fractions) and decimals,
 - apply arithmetic to everyday problems and recognize through such activities the need for further skills.
-

Measurement

2. Use measurement in relevant situations with an understanding of the concepts involved

- acquire an understanding of the concept of conservation of quantity,
- match, compare, and order lengths, areas, volumes, masses, time, and temperature, using appropriate terms,
- measure using arbitrary units and standard units, with a degree of precision appropriate to his or her stage of development,
- estimate quantities by sight, touch, or by comparison with familiar objects (such as parts of the body) and confirm estimates by measurement,
- use metric units of length, area, volume, mass, and temperature.

Primary Division

Geometry**3. Understand relationships involving space and shape**

- recognize spatial patterns in the environment,
- describe, identify, and classify objects by attributes such as shape, thickness, colour, and texture,
- identify solids such as the cone, cylinder, sphere, cube, cuboid, prism, and pyramid, and use terms such as *face*, *edge*, and *vertex*,
- construct cubes, cuboids, prisms, pyramids, and other three-dimensional shapes and frameworks, using patterns and appropriate materials,
- identify plane figures such as the triangle, rectangle, square, pentagon, hexagon, octagon, and circle,
- recognize symmetry in three-dimensional and two-dimensional figures,
- use introductory comparative ideas of scale such as *twice as large*, *three times as long*, *half as high*,
- recognize similarity through the use of drawings, maps, and scale models.

Listening**4. Listen with sensitivity and discrimination**

- locate, interpret, compare, classify, and discuss a variety of sounds
- recognize variations in intonation, volume, stress, pitch, and in the whole melody of speech,
- recognize the qualities and textures of sound,
- recognize a variety of language patterns, rhymes, sounds, and rhythms and make comparisons and find relationships,
- differentiate sounds within words (phonics),
- appreciate poetry and prose that is read aloud by others, and explore and interpret the human experience, feelings, and values expressed therein,
- appreciate models of good speech and of the effective use of sound and music,
- acquire an understanding of oral directions, messages, and reports.

Primary Division

Speaking

- 5 Articulate his or her own ideas, thoughts, and feelings with confidence and lucidity
 - use speech to establish and maintain groups in which learning is likely to occur
 - form ideas through impromptu talk using incomplete and tentative structures if necessary
 - master a vocabulary that enables him or her to name, describe, reason, explain, and use qualitative words as he or she plays, observes, manipulates, creates, and experiments with stimulating materials
 - discuss topics and issues that are personally significant,
 - participate in dramatic play, puppetry, choral speech, and oral reading



Primary Division

Reading

-
- 6. Learn to read using the initial skills and processes that he or she finds most effective**
 collect words and phrases that are personally significant, and classify them and use them creatively in various ways (e.g., booklets and dictionaries)
- perceive regularities and differences that characterize words,
 use his or her own words to build new sentence patterns,
 grouping rhyming words or words that begin in the same way into families, seeing little words in larger words, making new words by adding prefixes and suffixes or by substituting letters,
 understand and use simple syntactic, phonemic, and graphemic cues
- apply his or her reading skills to various kinds and levels of materials, including his or her own work and that of peers
-

Reading

-
- 7. Appreciate the significance and function of reading in his or her own life**
 use reading as a source of information and enjoyment,
 respond to print stimuli within the environment (signs, labels, directions, letters, initials),
 use a library or resource centre,
 organize and record information
 develop an interest in a wide variety of reading materials
-

Reading

-
- 8. Read independently with enjoyment and with a fluency appropriate to his or her stage of development**
 develop and use a variety of techniques for decoding words,
 understand and respond in personal ways to the ideas, attitudes, and feelings expressed in various reading materials,
- draw inferences from context, relate them to personal experiences, and extend the ideas presented in a variety of ways,
 develop his or her own reading materials by drawing upon personal experiences and language,
 - use reading as a source of personal enrichment and pleasure and thus take the first steps in recognizing and appreciating literary value
-

Primary Division

Writing
9. Express experiences, thoughts, and feelings in writing with clarity and sensitivity

- ✓ master a vocabulary of words, phrases, and expressions through which personal feelings, sensations, and observations can be adequately expressed,
- ✓ experiment with words, word patterns, and idioms,
- ✓ develop a sense of sequence and logic that enables individual progress from isolated phrases or sentences to the coherence of a paragraph,
- ✓ demonstrate an appreciation of style by incorporating in his or her own writing effective words or phrases selected from those encountered in reading and listening,
- demonstrate a knowledge of the patterns of spelling and rules of punctuation required for clarity,
- demonstrate a knowledge of common grammatical forms,
- ✓ write legibly in a manner appropriate to his or her stage of development,
- ✱ use writing for creative expression (e g , stories and verses),
- ✱ use writing for practical purposes (e g , sequential instructions for specific operations or short letters requesting permission or information),
- assess his or her own writing in appropriate ways,
- ✓ appreciate that writing can be used to inform, to explain, to describe, to narrate and to give voice to imagination and fantasy

Junior Division

On arrival in the Junior Division, some of the children may still lack the competence and confidence they need. They are in a stage of transition and may require continued individual help and varied practice.

The children who are ready and who have acquired competence in the areas outlined for the Primary Division may proceed to consolidate and extend these areas in the directions outlined for the Junior Division.

By the end of the Junior Division, the program will have provided the child with the opportunity to develop competence in the areas outlined below.

Learning experiences in the Junior Division will enable the child to:

Arithmetic

- 1. Use mathematical concepts and arithmetic operations with understanding**
 - compute efficiently using standard algorithms;
 - understand and use the commutative, associative, and distributive properties,
 - add, subtract, multiply and divide, using decimals and fractions,
 - use simple algebraic notations for number relationships such as $p = 4s$, $x + y = 24$,
 - relate the members of one set to members of another set using ideas of correspondence and mapping, including the interpretation and development of graphs, charts, maps, models, and other forms of representation,
 - use mathematical language correctly in real-life situations (e.g., *equal, equivalent, congruent, mean, probably, sample*),
 - draw conclusions from evidence obtained through experimentation or logical reasoning and apply mathematics to the solution of everyday practical problems
-

Measurement

- 2. Consolidate and extend the measurement skills outlined for the Primary Division**
 - estimate length, area, volume, mass, time, temperature, and speed with an appropriate degree of precision,
 - use the relationships between different units of length, area, volume and mass within the metric system,
 - acquire and demonstrate measurement skills involving the use of instruments such as protractors, clinometers, and magnetic compasses,
 - solve meaningful problems involving measurement and calculation with metric units

Junior Division

Geometry

3. **Understand more complex spatial relationships**
 - classify shapes in space (three-dimensional shapes) and in the plane (two dimensional shapes) according to their attributes,
 - discover patterns and identify properties of two-dimensional and three dimensional figures by tiling in the plane and stacking in space
 - develop concepts of symmetry related to point- line- plane-, rotational and translational symmetry,
 - identify the symmetries of figures in the plane and of objects in space,
 - understand and use words such as *slide*, *turn*, and *flip* in describing motions of figures in the plane and in space,
 - develop and use the concept of co-ordinates,
 - understand represent, and use concepts such as *vertical*, *horizontal*, *perpendicular*, *parallel*, *angle*, *triangle*, and *polygon*,
 - understand the concept of congruency,
 - identify relationships between similar figures and apply measurement skills in scale drawings



 Junior Division

Reading

-
- 4. Become aware of deeper levels of meaning in reading**
 master the essential word recognition strategies and use them appropriately as they are required (contextual, structural, and phonic clues and the dictionary)
- expand his or her knowledge of words as personal experiences expand and as the ability to use the dictionary, a thesaurus, and books dealing with the origins of words increases,
 - understand increasingly complex language patterns, styles, and forms
 - recognize the variety of contextual, stylistic, and symbolic clues that an author uses to communicate meaning,
 - adjust reading speed and techniques to his or her purposes and to the reading material
 - produce reading materials and share them with others,
 - understand and interpret ideas in poetry and prose and thus go beyond mere comprehension and recall of factual detail,
 - compare ideas or statements and predict conclusions,
 - use reading as a source of personal enrichment, relaxation, and pleasure
-

Reading

-
- 5. Use reading as a source of information**
- select realistic goals and formulate manageable questions for individual investigation
 - make extensive use of the school library resource centre and its reference and resource materials,
 - obtain information from graphic sources such as pictures, cartoons, diagrams, charts, maps, and tables,
 act on information received from recipes, directions, manuals, or patterns and evaluate the product,
 - check information for relevance, authenticity, and bias,
 - search for and detect inconsistencies and fallacies in texts,
 - organize pertinent information by paraphrasing, summarizing, and recording
 - express personal interpretations through notes, paintings, dramatizations, models, maps, or diagrams
 - test personal interpretations through interaction with others
-

Junior Division

Reading

6. **Develop a deeper appreciation of excellence in reading materials**
 read from a diversified selection of materials such as poems, biographies, novels, plays, myths, legends, newspapers, magazines, and cartoons,
 - read critically and develop an appreciation of function, style, feeling, intention, rhythm, mood, plot, and characterization,
 - begin to understand conflict in character and in ideas and values
 - develop an interest in reading for recreational purposes,
 - react personally in a variety of ways to ideas presented,
 - test the validity of personal reactions and insights in discussion with others,
 - develop personal reading tastes and interests
-

Writing

7. **Express in writing personal experiences, thoughts, and feelings with greater clarity and sensitivity**
 - select, record, and use interesting words, phrases, and expressions gathered in the course of personal experiences or obtained from a dictionary or other reference source,
 - identify the essence of what is to be learned and record it in his or her own words,
 - present ideas and information logically in paragraphs and in outlines and reports,
 - experiment with more compact phrasing and interlocking constructions,
 - demonstrate a growing knowledge of standard grammatical forms,
 - demonstrate a growing knowledge of the patterns of spelling and rules of punctuation required for clarity,
 - understand how words are put together, identify syllables, recognize and use prefixes, suffixes, root words, synonyms, antonyms, and homonyms,
 - demonstrate a growing ability to present thoughts, feelings, and experiences in a personal style

*Writing***8. Understand that writing can be used for many purposes and that the purpose determines the form of writing and the kind of language used**

adapt language to the intended purpose so that it effectively expresses personal experiences and feelings,

acquire and demonstrate the ability to use different forms of writing (e.g., diaries, letters, instructions, outlines, news items or scripts, records of trips or experiments);

communicate through imaginative and personal forms of writing (e.g., stories, plays, poems, fables);

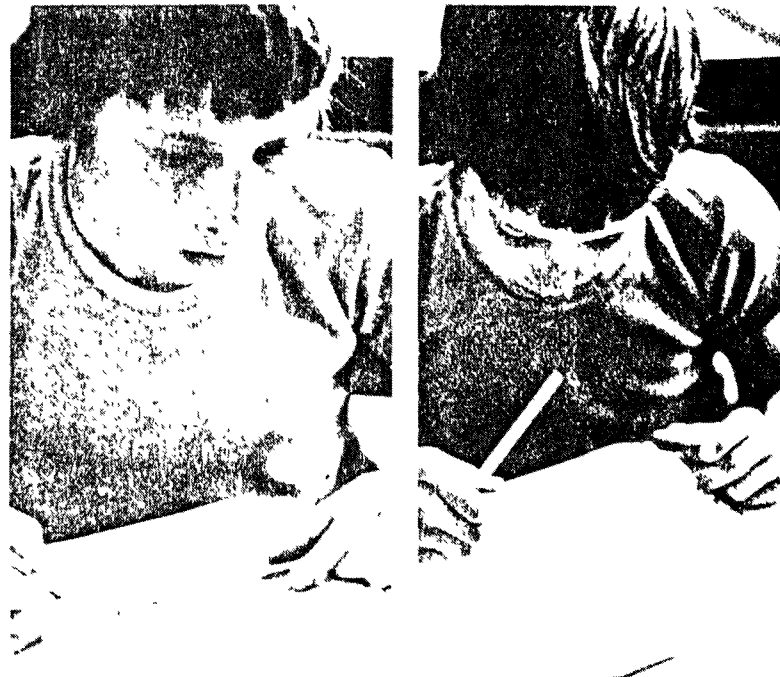
recognize and appreciate models of good writing;

recognize that facility in writing is gained through practice;

appraise and improve writing in the light of the purpose or audience.

*Handwriting***9. Develop legible handwriting commensurate with his or her psycho-motor skills**

demonstrate in handwriting an understanding of the elements of form and spacing and the use of margins and capitals.



Junior Division

Listening

- 10. Extend and consolidate listening skills and develop an appreciation of oral communication and literature**
 demonstrate increased competence in the elements of listening outlined for the Primary Division,
 acquire and demonstrate the ability to listen critically,
- listen to an increasing range of prose and poetry and become aware of the human experience feelings, and values expressed therein
 - understand and communicate with people who use different language patterns
 - listen sensitively and critically to oral reports and views expressed in a discussion and make pertinent contributions,
 - demonstrate the ability to extract information from oral sources
-

Speaking

- 11. Extend and consolidate the speaking skills outlined for the Primary Division**
- develop his or her private views through interaction with others, demonstrate in conversation, discussion, oral reading interviewing oral reporting, and role-playing the vocabulary, language patterns, and oral styles appropriate in questioning, explaining describing reasoning, and evaluating,
 understand and use the speaking skills involved in drama, newscasting, advertising, and other forms of oral presentation,
 understand and use the speaking skills required for the effective use of the telephone, the tape-recorder, and other contemporary communication devices
 appreciate that speech can convey nuances of emotion and attitude over and above its literal content,
 - appraise and improve personal speech habits

Primary and Junior Divisions

In the Primary and Junior Divisions, the program will provide the child with experiences designed to foster the forms of development outlined below.

The child in the Primary and Junior Divisions will be given opportunities to:

Perception and Expression

1. **Increase sensitivity of perception through the use of all the senses and develop the capacity to express this sensitivity through a variety of creative media**
 - appreciate that his or her own ideas and feelings have value and are worthy of expression,
 - develop the ability to express his or her ideas and feelings through active participation in drama, music, physical education and the visual arts,
 - become aware of his or her reactions to physical sensation and develop a healthy, positive attitude towards them,
 - classify objects by attributes such as colour, texture, shape, smell, sound and mass and develop vocabulary to describe and identify them,
 - use the opportunities provided by the arts to practise problem-solving both independently and co-operatively,
 - enjoy the power of creation through the use of colour, pattern, movement, sound, language and materials,
 - identify and use ideas gathered from the arts (e.g., those in nursery rhymes, songs, dramatic activities, the visual arts) to better understand our society,
 - develop the freedom of thought necessary for creativity

Drama

2. **Develop self-awareness and self-confidence through drama and related creative activities**
 - discover and clarify assumptions, points of view and emotional reactions and gain an awareness of his or her role as well as the roles others play
 - co-operate with others and develop empathy with them by working with them and exchanging ideas freely,
 - develop the ability to concentrate and gain confidence from growing powers of self-expression,
 - develop a greater awareness of bodily movement and of some of the factors inherent in movement expression (e.g., body awareness, body activity, relationship of self to space and to others, quality of movement)

Primary and Junior Division

Music

-
- 3. Develop sensitivity to sound and thus acquire a base for growth in music**
 enjoy and experience music through singing, playing, listening, creating, moving, and dramatizing;
- enjoy singing and become familiar with a wide repertoire of songs;
 - recognize and discriminate between different types of sounds heard in daily life and explore their potential relationship to music;
 - listen to music of various periods and styles;
- produce and experiment with sounds through a variety of means in order to become increasingly sensitive to rhythm, pitch, dynamics, timbre, form, melody, and harmony;
- develop the ability to use pitched and unpitched sounds in a creative way;
- become familiar with and develop the ability to use the language and grammar of music as a means of communication.
-

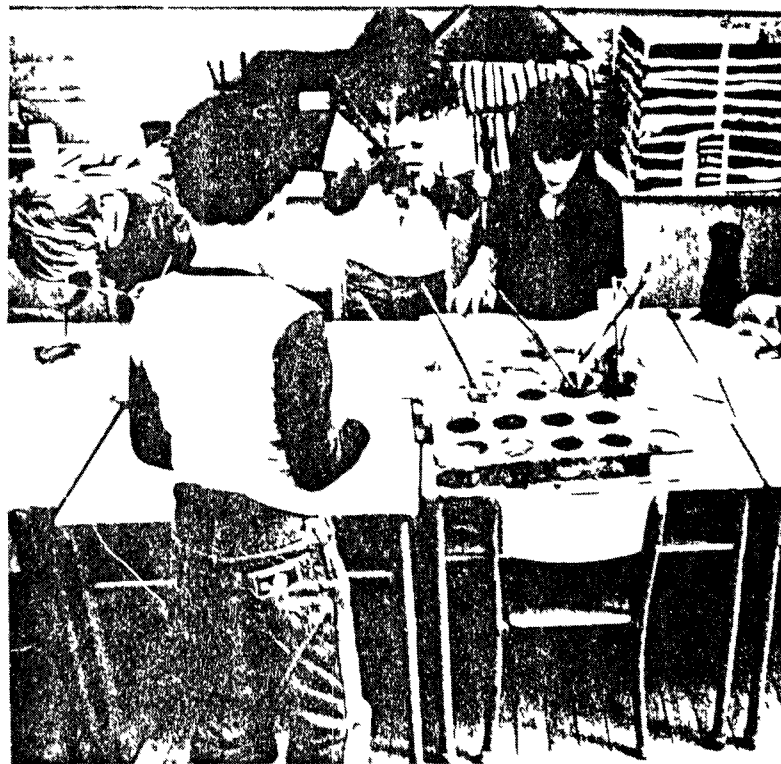
Visual Arts

-
- 4. Develop visual awareness, sensitivity, and appreciation**
 experience and respond to forms, events, and materials in the environment,
- perceive qualities of form such as similarities and contrasts, surfaces, patterns, rhythms, cohesiveness, line, mass, space, and colour in natural and manufactured objects and materials;
 - clarify and express personal experiences and feelings in visual form through a variety of materials and activities such as modelling, construction, painting, and drawing;
 - share visual expressions and relate them generally to the work of other people.
-

Primary and Junior Divisions

*Physical
Education*

5. Develop creativity, confidence, and physical fitness through physical activities
 - develop gross and fine motor skills through a wide variety of physical activities
 - develop an understanding of movement and a love of vigorous activity
 - develop the ability to estimate space and distance in relation to his or her own physical capabilities and movements
 - participate in individual and group games, movement exploration, activities, dance, and gymnastic sequences
 - develop an appropriate degree of balance, strength, speed, precision, and economy of effort in physical actions



Primary and Junior Division

Health

6. **Acquire some basic understanding of his or her physical and emotional nature and of the principles of healthy living**
 - acquire an understanding, at an appropriate developmental level, of such life processes as respiration, digestion, and reproduction and of the basic structure of the human body as it relates to these processes;
 - appreciate the relation of physical development to ability, emotions, attitudes, and behaviour;
 - acquire an understanding of the use, misuse, and abuse of mood and behaviour modifiers;
 - appreciate the interdependence of people and their environment and the effects of environmental conditions on health;
 - acquire an understanding of the fundamentals of good nutrition and become familiar with some of the alternative ways of maintaining these fundamentals as reflected in the culinary practices of various cultural groups;
 - develop appropriate understandings regarding sexuality.

Values

7. **Begin to develop a personal value system within a context that reflects the priorities of a concerned society and at the same time recognizes the integrity of the individual**
 - become aware of the values that Canadians regard as essential to the well-being and continuing development of their society—namely, respect for the individual, concern for others, social responsibility, compassion, honesty, and the acceptance of work, thought, and leisure as valid pursuits for human beings;
 - begin to develop a personal set of values by identifying value alternatives and their consequences, selecting personal values from the alternatives, internalizing the values selected, and acting in accordance with the values selected;
 - identify and analyse public value issues.

Decision-Making**8. Develop the ability to make informed and rational decisions**

extend and organize personal questions and interests and participate in purposeful first-hand investigations,

develop the elements of the scientific method, i.e., acquire the skills of careful and objective observation, learn to distinguish between observation and inference and use observation to test ideas, investigate ambiguity and make predictions, inferences, and generalizations,

make effective use of the various types of notation and reporting techniques,

develop the ability to obtain information from secondary sources by learning to plan an investigation and to formulate questions specific enough for investigation, to locate sources of information pertinent to a particular fact or theme, to identify the main point in a paragraph, to explain this orally and rewrite the information in his or her own words, to check information for accuracy, examine conflicting evidence, draw reasonable conclusions from texts, pictures, and charts, and to make useful notes of the information obtained from first-hand observations, reference materials, audio-visual media, and interviews,

organize information to illustrate a point, sustain an argument, or provide a basis for decision-making



 Primary and Junior Division

***The
Individual
and Society***

-
- 9. Understand social relationships at a level appropriate to his or her stage of development**
- understand his or her own nature and needs as a basis for understanding the nature and needs of others,
 - appreciate that his or her actions as an individual are reflected, in however small a way, in his or her physical and cultural setting,
 - develop insights into the functioning of groups and the individual's role in them,
 - understand some of the factors that contribute to effective interpersonal relationships,
 - develop self-respect, respect for the rights of others, and respect for the rule of law,
 - appreciate the development of civilization through the ages and understand and respect customs, institutions, and the historical background of diverse social groups and communities,
 - develop an understanding of such concepts as *community*, *conflict*, *culture*, and *interdependence*,
 - learn the social skills and attitudes upon which effective and responsible co-operation and participation depend
-

***Science
and
Geography***

-
- 10. Understand the environment, both in terms of the nature of its parts and of the patterns that characterize it as a whole**
- develop an awareness of the natural environment and of how it affects and in turn is affected by human activities, past and present,
 - develop an initial understanding of the relationships among natural things (e g the relationship between weather and erosion), among natural and manufactured things (e g , between machinery and air pollution), and between people and things (e g between the quality of life and the automobile),
 - perceive the development of patterns and relationships over time such as the structure-function patterns of living things, the interdependence of living things, and the relation of the form and structure of materials to properties and function,
 - develop concepts basic to science, such as *matter*, *mass*, *force*, *energy*, *time*, *temperature*, *change*, *interdependence*, *growth*, and *development*
-

 Primary and Junior Division

***Canadian
Studies***

-
- 11. Acquire a reasoned knowledge of and pride in Canada**
become familiar with the geography and culture of the community, the province, and the country;
- develop an awareness of law and government, and of the rights and duties of Canadian citizens,
 - become familiar with the historical development of the community and, at appropriate levels, of the province and the country;
 - develop and retain a personal identity by becoming acquainted with the historical roots of the community and culture of his or her origin and by developing a sense of continuity with the past,
 - begin to understand and appreciate the points of view of ethnic and cultural groups other than his or her own.

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Ministry
of
Education

Ontario

Minister of Education
Hon Thomas I Wells

Education in the Primary and Junior Divisions

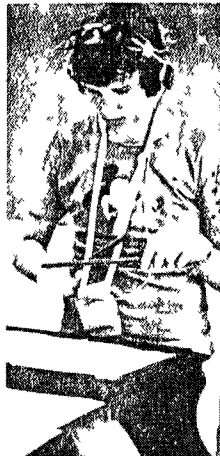


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Introduction

The Formative Years published under the authority of the Minister of Education, the Honourable Thomas L. Wells, sets out the goals for the Primary and Junior Divisions¹ of the public and separate schools of Ontario and states the expectations of the Ministry of Education with regard to the programs developed at the local level to meet these goals.

Education in the Primary and Junior Divisions provides an extensive philosophical basis and rationale for the program of these divisions. It also indicates how the program expectations set out in *The Formative Years* may be achieved in an integrated and child-centred framework.

These documents evolved from the report of the Curriculum Revision Committee of the Primary-Junior Cyclic Review. During the course of this curriculum review, thousands of Ontario citizens — teachers, parents, trustees, administrators, and others — responded to the request for information and guidance through discussions, surveys, and briefs. The PIJ1 Curriculum Revision Committee made a synthesis of these ideas and identified, within the framework of present knowledge and ways of thinking about education in the early years, the kinds of school experience most likely to lead to the full development of each child's potential. The substantive ideas in the report form the basis of the present series of curriculum documents.² Their development and validation have involved wide-ranging discussion and the participation of many individuals in the educational community.

The Ministry of Education views curriculum as all those experiences of the child for which the school is responsible. Curriculum is, therefore, concerned

¹ "Primary Division means the division of the organization of an elementary school comprising Junior Kindergarten, Kindergarten, and the first three years of the program of studies immediately following Kindergarten."
The Education Act, 1974, Section 1(38)

"Junior Division means the division of the organization of an elementary school comprising the first three years of the program of studies immediately following the Primary Division."
The Education Act, 1974, Section 1(25)

² These documents for the Primary and Junior Divisions include *The Formative Years*, *Education in the Primary and Junior Divisions*, and associated curriculum support documents

not only with *what* should be experienced, but with *why*, *when*, *where*, and *how* particular kinds of learning should take place, and with the *atmosphere* in which the learning occurs. Curriculum is concerned with *all* the human relationships in the school – with the respect in which children are held, with the values, aims, objectives, and decisions of the school community. Hence it is to the total context of learning in the school that *Education in the Primary and Junior Divisions* – and support documents – to *The Formative Years* address themselves.

Chapter One

Values, Goals, and Objectives

The goals of an educational system reflect the values held by the community. Values may be defined as those qualities of life that the individual and/or society considers important principles of conduct and major aims of existence.

Values take on meaning for the individual when they are accepted as personal precepts. The role of the teacher is to provide the context in which the child can begin to work out a personal system of values and in which he or she has opportunities to analyse values in a societal context. The teacher should provide a consistent example of an individual who lives by a clear set of values and who respects the right of the individual to diverge from the majority opinion.

As Canadians, we accept certain values as essential to the continuing development of our society. These include respect for the individual, concern for others, the concept of social responsibility, and the acceptance of work, thought, and leisure as valid pursuits for human beings. In keeping with these basic tenets, it is the policy of the Government of Ontario that every child be granted the opportunity to develop as completely as possible in keeping with his or her talents and needs. The Government of Ontario, on behalf of the educational community and other citizens, pledges to support an education program that endeavours not only to nurture every child's growth but to provide a fuller life during the years in the Primary and Junior Divisions so that each may pursue his or her education with satisfaction and share in the life of the community with competence, integrity, and joy.

It follows that the curriculum will provide opportunities for each child "to the limits of his or her potential" to

acquire the basic skills fundamental to his or her continuing education

- (i) Each individual must be encouraged to acquire "to the limit of his or her individual physical, mental, and emotional capacities, the basic knowledge and skills needed to comprehend and express ideas through words, numbers, and other symbols."

These basic skills fall into four broad categories:

- (a) the ability to comprehend ideas through reading, listening, and viewing;
 - (b) the ability to communicate ideas through writing, speaking, and other visual and non-verbal media;
 - (c) the ability to understand and employ mathematical operations and concepts;
 - (d) the ability to apply rational or intuitive processes to the identification, consideration, and solution of problems.
- (ii) Each individual should develop skills of inquiry, analysis, synthesis, and evaluation. Children who acquire such reasoning skills will be able to continue learning throughout their lives.



– *develop and maintain confidence and a sense of self-worth*

- (i) Education must make a major contribution to the intellectual, social, emotional, physical, moral and cultural development of each individual
- (ii) Each individual must be encouraged to develop such attributes as intellectual curiosity, awareness, sensitivity, perseverance, and a desire for excellence
- (iii) Education must respond to each individual's need to develop a positive sense of self including a desire for competence and continuing self-development and self-evaluation. The development of this sense of self worth will enhance the individual's desire to understand and examine personal interests, abilities and goals and to reassess them in keeping with the needs of an ever-changing environment

– *gain the knowledge and acquire the attitudes that he or she needs for active participation in Canadian society*

- (i) Education must prepare the individual child for life in our society by assisting him or her to gain insight into the functioning of society and the individual's role within it
- (ii) Education must assist individuals to gain an understanding of themselves as well as of persons belonging to social and cultural groups different from their own
- (iii) Education must assist individuals to develop the physical fitness and acquire the knowledge that will enable them to take advantage of the opportunities open to them for a satisfying and healthy life

– *develop the moral and aesthetic sensitivity necessary for a complete and responsible life*

- (i) Individuals should be given the opportunity to develop an appreciation of their cultural heritage, of the environment in which they live, of art, music, and literature, of the place of mathematics and science in the world's daily work, and of the importance of commerce and industry in the life of nations
- (ii) Education should encourage individuals to develop an appreciation of the ethics of their society and the conduct prescribed by such ethics
- (iii) Education must assist individuals to develop self-respect, respect for others, and respect for law
- (iv) Education must be conducted in such a way that each child may have the opportunity to develop abilities and aspirations without the limitations imposed by sex-role stereotypes or other forms of discrimination

The Formative Years identifies a number of aims that are components of the preceding goals, as well as a number of more specific learning opportunities that contribute to each of these aims, thus establishing expectations for the programs developed for the Primary/Junior Divisions

There are many ways of meeting these expectations in each jurisdiction, family of schools, or school. The setting of local objectives within the framework of the provincial aims should leave the principal and individual teacher the freedom to select and adapt the objectives, materials, and sequences that are likely to be the most profitable for the children. Since learning and teaching are complex activities, classroom objectives may emerge and change during the process of learning. This is because children learn in individual ways, which do not necessarily follow a prescribed sequence, and children and teachers must change their approaches to meet the immediate demands of the tasks. There may be several ways of selecting material or tasks to meet any one learning objective.

When framing objectives for specific learning experiences, the teacher may find the following questions helpful:

- Do these objectives interpret and support the major provincial goals?
- Which are the most important objectives?
- Are these objectives consistent with one another?
- Are these objectives realistic and appropriate for the child or children concerned?
- What are the conditions under which learning is to take place?
- What assumptions about learning must be considered in selecting teaching approaches for these objectives?
- What are the criteria for the assessment of achievement?



Chapter Two

Children and Learning

Paramount to all curriculum decisions are the children and their individual ways of learning. These are affected by such intrinsic factors as the stages of the individual child's emotional, physical, cognitive, and moral development, his or her general abilities, and specific talents. In addition, extrinsic factors such as the child's pre-school environment have affected them.

Pre-school experience sets expectations, motivates and reinforces the child's particular style of learning, and affects language patterns. Teachers need to understand the experiences, the values, and the language style that a child brings to school in order to set objectives and select learning experiences that will take advantage of the influence of the home. Observations gained by working alongside the child in an atmosphere of mutual trust will soon reveal both needs and interests to the teacher. This awareness of what each child needs, of how he or she learns, and of the extent to which he or she can be expected to generalize forms the basis of successful planning. Teachers can also gather reliable information about each child through a working partnership with parents.

The child's sense of self-identity is another key influence on learning processes. Knowing oneself and finding worthiness in that self are basic human needs. To respond to those needs, the teacher must care for the children and be sensitive to each individual child's progress. Teachers must *show* that they care. Children need to have these basic needs for security and self-esteem satisfied before they can begin to attend to learning in school.

When first entering school, the young child has a tremendous adjustment to make to new emotional and intellectual tasks, to strange adults, and to other children. Frequently, coping with these new experiences produces tensions that result in temporary relapses into babyhood—nail-biting, thumb-sucking, toilet-training problems, crying, dependence on adult attention, and jealousy of others. The teacher needs to be sensitive to the child's sense of strangeness and be ready to help him or her to regain security through involvement with the other children.

Research

Although guided chiefly by his or her knowledge of the child, the teacher may find it helpful to consult the findings of current research. Two major emphases emerge in the literature of current educational research. One is centred on behaviourist, the other on cognitive-field-development theories.

The behaviourist approach is based on the assumption that learning can be analysed into stimulus-response patterns and conditioning based on the laws of reinforcement, association, and repetition. The application of behaviourist principles to task analysis in learning has demonstrated that skills, concepts, and understandings can be built up from a succession of simpler skills or sub-concepts. One application of behaviourist principles is programmed instruction, in which a child learns through a self-reinforcing program arranged in finely graded steps. Behaviourists explain the acquisition of habits or simple motor skills in the same way. Complex visual-motor skills such as those found in creative writing and in reading, however, are difficult to explain by behaviourist assumptions; they require more complex explanations.

The cognitive-field development approach is based on the assumption that learning is an orderly development in successive patterns of increasingly intricate mental structures. These mental structures develop as the child grows through experience with people, things, and symbols. According to this theory, learning is purposeful and the child is an agent in organizing his or her own knowledge. Of the two approaches, a cognitive explanation is more appropriate in dealing with complex behaviours such as communication, concept-formation, and problem solving.

Individual Differences

Implicit in the philosophy of this document is the idea of acceptance — the acceptance by the school of all children with their wide variations in ability, physique, and personality. As children develop, they exhibit differences, not only one from another, but also within themselves as they seemingly spurt ahead at one moment only to slow down the next as though on a plateau.

There is a particularly wide variation in the development of children towards the end of the Junior level. The same child may even vary in the maturity of his or her behaviour from day to day. Differences in the development of boys and girls become especially evident at this time. Some girls begin their growth spurt as early as ten years of age and most of them reach skeletal maturity well in advance of the boys. Mental ability and social maturity have a significant, though low, relationship to physical size and pace of development. Thus the fast-developing children who grow more quickly and enter their growth spurt earlier often appear to be more able. For this reason, it is generally considered that girls have a distinct advantage over boys in some areas of development at this stage.



Special Needs

While the sensitive teacher will anticipate wide variations and be prepared to cope with them, it is occasionally necessary to accept the fact that there are children who show such divergence in their physical, intellectual, communicative, social, or emotional development that major curriculum modification and/or special services must be provided for them. The objectives of such special services or curricula are no different from those outlined in this document. The focus is still on the individual and his or her optimal development as a skilled, free, and purposeful person, able to manage himself or herself in an open society.

Children with physical exceptionalities need opportunities to explore their environment and to expand their perception of the world. Essential to their perceptual and conceptual development are sensory experiences with all sorts of manipulative materials. They need opportunities for movement and play, even in a wheelchair.

Children who are intellectually handicapped may need for longer periods than other children a curriculum that is concrete emphasizing multi-sensory and manual experiences. They also may need more guidance and structure for reading and number work. Only teacher experimentation and observation will provide the proper basis for decisions about what the child needs.

On the other hand, children who possess unusual talents in the arts or who are intellectually gifted also have needs that should be recognized. With some adjustments to the curriculum such as more opportunities for independent exploration or creative work, their strengths can become both a personal and a social resource.

Before interpreting the difficulties of children with communication exceptionalities, the teacher must know how most children normally acquire and use representations and symbols and how they communicate through gesture, movement, play, picture and language. Such knowledge provides a necessary basis for choosing appropriate learning activities for children with difficulties.

Every exceptional child has the right to be part of the mainstream of education to the extent to which it is profitable. Care, however, must be taken to ensure that the exceptional child's needs are met in terms of staff, curriculum, method, materials, and organization. If the child meets too many frustrating situations, or experiences too much failure, behavioural problems such as withdrawal or aggression may result. The capable teacher will use the child's strengths in group work and focus on problem areas when working with the child alone. In addition, full use should be made of all the supportive services available to the school.

Concepts

Recognizing these variations in the development of children, the teacher in the Primary and Junior Divisions has as a major concern the responsibility of helping each child move to the degree to which he or she is able, from experiences with concrete objects and real phenomena through visual symbols towards abstractions. Although some children will reach the level of abstract reasoning before the end of the Junior Division, the teacher should recognize that, for many children, reasoning remains concrete and practical and confined to specific relationships that involve no more than two factors at a time.

Children can acquire basic and powerful concepts, such as those of pattern, symmetry, order and similarity if they are given appropriate learning opportunities. These general concepts are powerful because they can be applied to many different experiences in the arts, in movement, in music, in science, and in mathematics. They continue to develop through organized activities over a span of years.

Some concepts that many children are capable of developing in the Primary and Junior Divisions are outlined on the following pages.

- An understanding of concrete relationships (*near-far, inside-outside, before-after, cause-effect*) may be within the grasp of a seven- or eight-year-old child, but appropriate experiences are needed to deepen such understandings and expand them for wider application.
- The concept of space also grows from the children's experiences. At first, they explore personal space by moving and acting in their immediate environment. The next stage is action space, which they discover through patterns of controlled movement and weight through pushing and pulling, and through balance and momentum. Next comes the concept of body space, which is the position of objects in relation to oneself and which is closely allied to object space, which is the relation of one object to another. Finally comes symbolic or map space, which allows children to visualize objects through pictures, written perspectives, or co-ordinates.
- Area can be understood as a measure of surface by nine-year-olds, but they may encounter difficulty in comparing areas of irregular surfaces. Formulas for calculating areas are best understood if they are developed as generalizations from practical experiences. The child needs experiences with three-dimensional objects in order to develop intuitive feelings about volume and capacity, but fully developed concepts about displaced or filled space may not be acquired until about age thirteen.
- Understanding of invariance is the realization that relationships remain constant even though properties such as size and shape change — that is, the number of a collection does not change even when the group is rearranged or altered in appearance. This concept of the identity and stability of substance is established only at about age seven. It underlies all scientific thinking and mathematical ideas of number groups and operations. Thus children's understanding of this concept enables them to engage in such a mathematical operation as addition.
- Ideas of time begin with experience — mealtimes, elapsed time, and points in the day. Ability to tell time, often acquired by eight years of age or earlier, is a complex understanding, but is only a small part of the concept of time.
- Children's historical concepts and perceptions are usually limited to family generations, extending at most to their grandparents' time. The time line beyond their grandparents is likely to be insecure, and events of widely differing times have a confused relationship, with little or no sense of length or interval of time. In their own generation, young children have difficulty even with ideas of *younger* and *older* among brothers and sisters.
- Children of the Junior Division should have experiences that give them some idea of the relation of the past to the present, but full understanding of historical time is usually not attained until age thirteen or fourteen.
- Concepts of time and space affect one's collective perceptions of the envi-



ronment. Thus children's grasp of geographical concepts is usually limited to concrete understandings of familiar and experienced places such as one's immediate locality or routes frequently travelled. Consequently, abstract concepts such as village, town, community, region, capital city, province, and society are slow to emerge and may not be understood until nine years of age or later.

- Even in moral and ethical understanding, children appear to move through stages. The five-year-old has concrete ideas of behaviour and punishment related to specific situations. Rules are imagined as always being made by others. Nevertheless, six- and seven-year-olds should be involved in deciding what rules should govern their own behaviour and their relations with their classmates. By the end of the Junior Division, most children develop some realization that rules are agreements by which equality and quality are achieved in society.

- The curriculum can contribute to intellectual independence through experiences that include making decisions, working independently and in groups, and choosing and carrying out appropriate tasks. Such activities help the child to move away from reliance on external approval and control and allow the development of intrinsic values that are consistent with personal purposes as well as with those of society.

- By the age of six, children can sympathize with the feelings of others but only gradually do they learn to see situations from another's point of view. Children may reach the end of the Junior Division before they can fully imagine themselves in another's position.

Discussion, role - taking, and drama may contribute to an earlier development of concern for social values. Experience of group membership is also important in helping children to see others' perspectives, to compare experiences, and to form a more objective view of their relationships with others.

- Children's important learnings in the area of social and personal behaviour are based on observation and imitation of models such as the teacher or a parent they love or respect

Such learnings are not confined to attitudes but extend to techniques and ways of perceiving. Membership in a group or community not only provides models for imitation but also gives opportunities to practise the behaviour and attitudes that the community finds desirable. Habits of careful work, persistence, attention to tasks and honesty of observation and reporting are stimulated by working in a group and meeting standards set by the group and accepted by the individual. Gradually, through the Primary and Junior Divisions, children develop practical ideas of loyalty and understanding of group relations.

Assumptions

In summary, the following assumptions about children and learning are basic to the curriculum set forth in this document:

- Children are curious. Their need to explore and manipulate should be fulfilled through handling real things that involve more than one sense. The more all the senses are involved, the more effective the experience.

- Most human activity is a purposeful search for pattern. This includes organizing new information and relating it to previously developed concepts. Incongruity between old patterns and new experiences stimulates questioning, observation, manipulation, and application in a variety of new situations. Maintaining the right balance between novel and familiar experiences in learning situations is one of the most vital tasks in the art of teaching.

- Learning experiences gain power if they are part of organized and meaningful wholes.

- Children have an intrinsic need for mastery over situations, a need that they express by using their experiences to search out the significant patterns in reality and thus reduce uncertainty.

- Children find self-fulfilment in successful learning, and are not motivated merely by external rewards and approval. Pupils engaged in self-rewarding activity with a sensitive, consistent teacher who makes demands appropriate to their own level are having a happy experience.

- Play is an essential part of learning. It is free from the restrictions of reality, external evaluations, and judgement. Children can try out different styles of action and communication without being required to make premature decisions or being penalized for errors. Play provides a context in which the teacher can observe children's handling of materials and social situations, assess their stage of development, and encourage experiences that further their growth. The teacher should know when to intervene unobtrusively, when to add to or change a play situation, when to provide a toy telephone,

a costume, a question, or a suggestion that will further the fantasy or broaden the experience.

- Children learn through experience with people, symbols, and things. Things may be objects, events, processes, or relationships.

- The symbolic process for children develops through a sequence of representation. Initially children must understand that a real object can be represented by such symbols as a spoken word, gesture, dramatic movement, toy, model, picture, ultimately they must understand that an object can be represented by the printed word. The development of symbolism underlies the communication, recording, and coding of experience in a condensed and systematic form. Full understanding of symbols, however, is slow to emerge.

Chapter Three

Teaching and Learning

Teaching and learning are based on a process of continual interaction in which teacher and child are partners. For learning to be effective, the one who makes the first move must find the other ready to respond. The child will indicate his or her needs, readiness, and capacity through questions and behaviour; the teacher must be prepared to respond or to initiate and motivate appropriate learning activities. In either case, the teacher must take responsibility for the general purpose and direction of learning by building variety and choice into the learning sequence and materials.

There are numerous considerations that confront the teacher in fulfilling these responsibilities. These considerations include such matters as content, values, concepts, skills, learning groups, time, space, and resources.

Content

Content is more than subject matter or a set of facts and opinions such as those contained in a textbook. It is a major resource for learning, existing for the purpose of providing significant learning experiences for children: information, values, concepts, techniques, strategies, and skills. It is assumed that the source for content will be the environment – people, things, and symbols.

Both the teacher and child should be involved in choosing content. If the teacher starts the process, he or she must pose a question or initiate an activity that catches the imagination of the child. If children are encouraged to pursue topics of individual interest, there are likely to be as many questions as there are children. The children's involvement is important because content that they have chosen themselves is most likely to motivate learning.

In either case, the teacher fashions the topic into a content vehicle through which he or she can assess the needs of each child and through which the child is enabled to acquire the values, concepts, information, opinions, techniques, learning strategies, and skills that the teacher has identified as the objectives of the curriculum. The teacher should not, however, ignore

opportunities for learning that arise outside the context of planned objectives.

Selection Criteria

However it arises or however it is organized, content should be consistent with the goals of education outlined in chapter 1, 'Values, Goals, and Objectives'. The assumptions about children and learning outlined in chapter 2, 'Children and Learning' define the criteria by which it may be chosen.

- Will it give children an opportunity for direct inquiry, independent study, and creative ability in the context of their own interests, abilities, and developmental needs? Will it fulfil their needs to explore and to manipulate? Will it capitalize on the use of all their senses?
- Will it satisfy the children's search for pattern by building concepts that can be developed and related to other learning?
- Will it relate to what the children already know?
- Will it be sufficiently novel to stimulate questions, observations, and manipulations?
- Will the children be able to see what they are learning as part of an organized and meaningful whole?
- Will it spring from real experiences in the children's environment? Is it relevant to their understanding of the world? Is this content appropriate to each child's level of development?
- With this content as a vehicle, will the children be able to know when they have been successful? Will it fulfil the children's basic needs for mastery? Will it provoke questions, involvement, and a desire for further exploration?
- Will it utilize all the channels of learning — visual, auditory, motor-manipulative, olfactory, gustatory, and tactile?
- Will it encourage learning through play?
- Will it provide experiences with qualitative relationships such as texture, colour, and sounds, and with quantitative relationships such as number, distance, size, and mass?
- Will this content provide opportunities for various techniques of investigation?
- Will this knowledge or technique be personally or socially useful? Will it help children to learn skills that will help them to manipulate, observe, reason, record, and communicate?
- Will this content lead to a reasoned knowledge of and pride in Canada and motivate children to build their own understanding of their environment and community?

Balance

In the process of developing a program based on the above criteria, the teacher may wish to ensure balance by a consideration of the following system of classification:

- empirical knowledge — that is, the activities and understandings concerned with finding out about things, events, and processes in the physical, bio-



logical and social world – both through observation and experimentation,

- symbolic activities – that is, finding and using symbols such as numbers, shapes and words
- aesthetic activities – that is, interpreting and expressing experience in artistic form and recognizing the same process in the work of others
- ethical development – that is, working out a set of values by which to live and recognizing that each individual is part of the fabric of society and affects its total character by his or her actions
- integrative activities – that is, synthesizing learning across disciplinary lines

Valuable as the above criteria may be, individual children and their ways of learning will remain the basic criteria in choosing content. The teacher,

being aware of what each child is and of what he or she knows, must relate this awareness to the disciplines of knowledge which are in effect patterns of ways of perceiving and organizing the environment. In this sense, the teacher provides a curriculum that is both child-centred and knowledge-centred. More specific material that will help in this task is found in the sections on Communication, the Arts, and Environmental Studies.

Values

As stated in chapter 1 'Values, Goals, and Objectives', values take on meaning for the individual when they become internalized. The role of the teacher is to provide the context in which the child can work out a personal system of values and begin to develop a way of analysing value issues.

In helping each child to develop a value system, the teacher must keep in mind that values may be consciously selected or unconsciously acquired. The teacher's task is to help each child consciously develop a clear set of values through a process that might be described in this way:

- becoming aware of the existence of values
- identifying value alternatives and their consequences
- selecting personal values from the alternatives
- internalizing the values selected
- acting in accordance with the values selected

Discussion of a shared experience acquires a value dimension when *it is* becomes *it ought to be*. Such a dimension involves the raising of value questions. *How does the story end?* becomes *How would you like the story to end?*

Values could enter into the study of animals. For example, if children were to visit a zoo as part of a study, the following question might be raised: *Should wild animals be kept in captivity or be set free?* Value questions like this could stimulate a discussion of the nature of animals, of man's relation to nature, and of the preservation of the species. Value issues and conflicts might be identified in the process and children could consider what their value judgements were. Teacher and learner alike would be free to contribute their ideas for scrutiny. Such a process can be a dimension of any topic that arises in the Primary or Junior classroom.

Analysis of value issues presents another aspect of values in the curriculum. Here it is important for children to regard value issues as capable of solution through inquiry and discussion. They should evaluate and weigh information, form points of comparison, and then analyse and interpret the information in order to reach a rational position.

Teachers must not impose their own views on the children. The role of the teacher is to provide the context in which a child can develop values that reflect the priorities of a concerned society and at the same time recognize his or her integrity as an individual.

Concepts

While concepts are inappropriate and irrelevant as principles to be described verbalized or memorized by children, they do provide a framework within which a teacher or group of teachers may plan. Occasional verbalization of a concept by the teacher may be justified but only insofar as it is expressed in terms that are comprehensible to the children. The teacher must be aware of the possible misconceptions that children can build when they only hear about such abstractions as election, law, government, and authority. If children are to understand such abstractions, even in the initial stage of development of the concept, they must have specific examples with which to work. These important ideas have to be related directly, honestly, and simply to the children's level of comprehension. At the same time, they should not be simplified to the point of distortion. They may well have to be explored again and again on successively higher levels of generalization as children build up their concepts and inquiry skills from active learning about the environment.

The teacher should make use of situations and tasks that are similar to encourage children both to confirm and extend their understanding through the transfer of ideas. Relationships that are difficult to identify in one situation may be easily seen in another. Although it may seem small, success in the transfer of knowledge in these situations can contribute substantially to a child's self-confidence and enthusiasm.

Particular concepts may arise in different contexts time after time. Quite often an idea that is familiar to children in one context may be totally new in another. For example, children who understand that the quantity of rubber (its mass) remains unchanged when a rubber band is stretched are often baffled by the same principle applied to water in containers of different shapes. The foregoing, therefore, applies not only to the development of new concepts but to the integration, application, and reinforcement of old ones.

Transfer of learning also reinforces the perception of the relationships among objects, events, and processes which underlie concept-formation. Such understanding takes time to develop. It is not accomplished in one lesson, nor necessarily in a week or month, nor at the end of a particular sequence of work. Understanding has to grow in its own time for each child. Major understandings may grow out of years of experience of the same concept in its many variations.

Skills

Acquisition of skills is related to the development pattern of children. Therefore, it seems advisable to establish reasonable levels of expectation, that is, levels related to the individual child's development, rather than to spend excessive time working prematurely on skills in return for little, if any, improvement. Children can learn skills from one another through example and imitation as well as by teacher instruction.

More than one skill can be developed through the same learning activity. For example, purposeful practice of inquiry skills stimulated in Environmental Studies may necessitate the use of communication skills such as mathematics or reading and may culminate in a written report or artistic display. The teacher's task is to anticipate the various skills and sub-skills required by the topic under study and to help children select and sequence those that are congruent with their own purposes and stage of development.

The following statements on skill acquisition contain further implications for the teacher.

- Skills and techniques are learned most effectively when the child sees that they are necessary for a particular task.
- Intervention in the form of direct demonstration and/or instruction may be necessary when a skill is introduced or when it is developed to a more complex level.
- Skills are refined and improved through practice in a variety of situations.
- Pacing should be adapted to the ability and learning style of the child.
- Intervention and practice must be flexibly organized for individuals and groups, not necessarily applied to a whole class.

Skills more specifically related to the three learning clusters outlined in this document are described in the appropriate sections.

Learning Groups

A basic tenet of this document is that children have individual needs and styles of learning and that they need experiences in working both independently and in groups. It follows that the teacher must plan a variety of groupings to meet these differing requirements. These could include:

- individuals working on assignments, inquiry, research, practice, or prepared materials;

- work groups chosen by the children or suggested by the teacher;

In this case, from two to five children work together on a reading or number game, carry out an experiment, make a model, help one another to research a topic, or play together in the house corner, the dress-up corner, or store.

- larger teaching groups useful for separating children according to ability or need;

These larger groups may be useful for teaching specific reading skills, certain aspects of mathematics, and so forth.

- class groups, that is, groups that consist of entire classes:

These are useful for activities such as planning a project, story-telling, physical education, and sometimes drama.

Throughout the day, the teacher will need to guide children through their individual sequence of tasks if confusion is not to result from such a variety of activities. Once the children have learned to follow their individual sequences, and know when to move from one group to another or when to



work alone, the teacher is free to devote more time to the needs of individuals and small groups.

Groupings should be retained only as long as needed. They may be organized on need or achievement level for purposes of teaching specific skills. Interest groups, on the other hand, can also include children who are younger and older, more and less able. The teacher and the group can help the less able to make their contribution, while the more able can assist the others and reinforce their own learning, both gain intellectually and socially. The child who compares personal experiences and ideas with others in a group expands his or her understanding and reaches new perspectives. In group work, it is especially important that no child should feel lost or left out.

Some schools may bring together two or more classes or age groups, either within a conventional classroom or within one of the new forms of teaching space. Various school buildings can accommodate a wide variety of forms and sizes of groups if the problem of matching space and people is tackled with conviction and imagination.

Time

Learning from real life situations, from exploration, and from inquiry imposes rhythms of time that cannot be tied to a timetable. For example, short intensive periods may be necessary for the development of certain skills such as spelling, handwriting, or computation; an experiment in mathematics or science may take a morning or longer; a project may extend from two weeks to a full term.

- In planning for effective use of time the following factors should be noted
- ✧ There is no evidence that any particular learning experience should take place at a fixed time during the day
 - ✧ It is practically impossible to predict the time each child needs for various tasks or experiences
 - ✧ Balance between areas of the curriculum and kinds of learning should be examined on a weekly or monthly basis, not in terms of a single day's activities
 - ✧ Responsibility for planning activities and using time should be shared with the children

As far as possible, experiences that reinforce each other in learning should occur close together. For example, learning about measuring could be followed by the making of models or maps. The children might then find that they need to learn more about measuring. Children who have identified their own requirements in this way are motivated to work with greater zeal to acquire the basic skills they need.

A schedule or timetable may be necessary for certain purposes such as sharing the library resource centre or the gymnasium, but it should be considered only as a guide to be altered as the need arises.



Space

Dynamic learning activities require a variety of space, different uses of the same space, and ready accessibility to storage facilities and resources. Storage space is important, particularly since increasing community use of facilities may necessitate daily clearing away.

Teachers should be able to improvise with existing facilities to provide:

- subdivision of large areas into small learning areas, centres, or bays, by means of portable dividers that double as display areas and as storage units, racks, portable bins, trolleys, or shelving;

- movable work space for experiments in mathematics and science as well as storage space for necessary materials and apparatus,

- work benches and storage space for metric measuring devices, tools, and raw materials,

- a water supply and adjacent surfaces suitable for wet and messy work (e.g., activities with sand and water trays),

- surfaces for painting,

- different surfaces and different levels that can be combined into larger working surfaces for groups of children;

- a quiet area for listening, reading, and recording, with storage space for appropriate materials,

- an open space for imaginative play, drama, or story-telling;

- an outdoor area adjacent to the classroom and large enough to accommodate such different activities as free movement and experiments with plants and animals.

Resources

Effective planning implies making the best use of resources, both human and material. The presence of a rich variety of metric measuring devices, tools, materials, books, and equipment is in itself a stimulus to learning. Common to all is the intent to provide children with a variety of first-hand experiences. These resources should be relevant, varied enough to challenge each child, and placed within reach so that they entice the learner to experiment, shape, measure, mould, and master (see chapter 6, "Environmental Studies", pp 103 – 104).

Integration of activities allows different resources to serve several purposes and to reinforce one aspect of learning through another. The resources for studies of the arts or the environment, for example, can serve the purpose of communication.

Providing each classroom with a few copies of various textbooks, rather than a class set of one series, encourages the children to develop the habit of critical reading and to form their own opinions of different materials. The teacher should also be alert to the possibilities presented by "old" books. These can be cut up and the relevant parts incorporated in reference booklets developed by the children.

Human resources include the child's own active mind and his or her experiences, other children, the adults with whom he or she comes in contact, and the teacher. Inherent in the teaching-learning assumptions of this document is the concept of the teacher as a *major* resource. This concept requires teachers to be both enthusiastic and knowledgeable in many fields; consequently, some teachers may feel somewhat handicapped by lack of competence in a particular area. With collective planning by staff, the strengths of each teacher can be used to advantage. Such sharing of strengths requires good communication, close cooperation, and consistency of expectation among all concerned.

Questioning is an important tool or resource in the hands of a competent teacher. Becoming aware of the many kinds of questions that exist and their differing uses can help a teacher avoid the trap of asking too many questions of fact. Some factual questions are needed, but more profitable in the long run are those which lead the child towards higher levels of learning such as inferring, analysing, or generalizing.

Parents are also valuable resources. They can represent occupations and roles in the community, provide specialized information in a personal way, supply skills in art, music, or the crafts, and sometimes accompany small groups on field trips. Parents, grandparents, and even great-grandparents can provide a rich source of stories, photographs, and documents that become relevant during investigations. Parents are also a rich resource to teachers in getting to know the children.

Exchanges with schools in different parts of the community, the province, the country, or abroad constitute another rich resource. Such arrangements allow children to exchange reports of their own investigations, they can pose and answer questions and develop pen or tape friendships. Instead of using second-hand information about the Arctic or Niagara, children can study one another's areas through people they have come to know. The climax of such exchanges might well be a visit with the new friends.

APPENDIX E

THE REVISED ANALYTICAL MODEL

The purpose of the Analytical Model is to direct an objective evaluation (analysis) of curriculum guidelines. The Model consists of two sets of questions and procedural directions. The first set of questions is used to conduct a broad analysis of a guideline. The broad analysis identifies all potentially pertinent statements. The second set of questions (sub-questions) is directed to the statements identified through the broad analysis for the purpose of making some judgment about them. Where appropriate supporting statements from the literature on curriculum theory and content analysis are included to enhance the user's understanding of the model.

Questions for the Broad Analysis

Questions for the broad analysis are based on five areas of agreement about curriculum theories.

1. What value positions did the writers take as reflected in: statements of ideology, statements of general goals for a curriculum, statements identifying sources for a curriculum's content, statements identifying beliefs about the nature of learners for whom the curriculum should be designed, and statements identifying learning theories that should influence curriculum decisions? Statements of ideology are those which indicate the "basic orientation" (Herrick and Tyler, 1950, p. 121) and give rise to explanation of "what additional criteria are imposed in curriculum selection" (Johnson, 1967, p. 137) and "choice of goals" (Payne, 1969, p. 9). Goal statements are statements of intent which reflect the "philosophy, beliefs, or empirical evidence" (Payne, 1969, p. 9) that direct the decision making. Johnson (1967) suggested that

"various criteria may govern selection of curriculum from available content" (p. 137). Beauchamp (1975) named some possible sources of content as being: the results of adult surveys and job analysis, recognized disciplines, the results of needs assessments, cultural and societal needs, past experiences in curriculum, and social and political authority (p. 78-79). Statements about the nature of the learners for whom the curriculum should be developed should include those that speak of the learners' "motivation", "maturation and capacity" and "cognitive processes" (Payne, 1969, p. 11). Statements about learning theory should include responses to Payne's (1969) two questions:

Is there a statement of belief about learning or the learning environment or about the practice of instruction intended to apply to all phases of the program? (p. 8)

Are there any explicit statements about the nature of learning and the conditions under which it occurs? (p. 11)

2. What statements did the writers of the documents make to give direction to the design or organization of the curriculum content?

The term "design" is used in the noun form in this question and refers to "an organizing scheme" (Herrick and Tyler, 1950, p. 67). The intent of statements giving direction to a curriculum's design is to maximize the "cumulative effect in curriculum learning" (Herrick and Tyler, 1950, p. 67) through "effective sequence" (Herrick and Tyler, 1950, p. 44) that shows "orderings that are mandatory for instruction" (Johnson, 1967, p. 138). The "vertical" and "horizontal" (Merrick and Tyler, 1950, p. 44) organization of the curriculum may be directed by statements that show "major divisions, departments, courses" (Payne, 1969, p. 8), "unit topics, daily

topics, specific examples" (Payne, 1969, p. 11), or arrangements of "objectives" (Payne, 1969, p. 11) for courses, units or activities.

3. What statements did the writers of the documents make in order to give direction to the development of the curriculum and use of the curriculum? Development refers to the processes of "selection" (Johnson, 1967, p. 137); Beauchamp, 1975, p. 78) and "organization" (Beauchamp, 1975, p. 78) of the curriculum's content. Statements directing these processes could include, as suggested by Herrick and Tyler (1950), indication of those persons responsible for the various decisions at the different levels within the curriculum system. Payne (1969) raises a number of questions that could be answered in statements giving direction to use of the curriculum. Most of her questions focus on the relationship between teacher decisions and directives given in guidelines. In particular she suggests that the guidelines should make clear where teacher autonomy is given and where conformity to directives is demanded in decision-making areas such as "goals, objectives, activities, and materials" (p. 15).

4. What statements did the writers of the documents make in order to give direction to the assessment of curriculum decisions? The major purpose for assessment of curriculum decisions is to provide feedback that supports "continuous regeneration of curriculum decisions" (Beauchamp, 1975, p. 82). Beauchamp (1975) identified evaluation of teacher use of the curriculum, evaluation of the design and evaluation of pupil outcomes as sources for feedback concerning decisions. Johnson (1967) suggested "empirical evidence based on instruction can identify structural errors

and omissions in selection" (p. 139) of content. Payne (1969) suggested "criteria for selecting and organizing subject matter and materials" (p. 11) should be given along with "purposes" (p. 11) and possible "methods" (p. 11) or "procedures" (p. 11) for conducting evaluation. Also, Payne (1969) indicated that suggestions "for the analysis and use of the results of evaluation" (p. 11) might be given in curriculum plans.

5. What definitions were given to terms used in statements responding to the first four questions directed to the broad analysis?

The definition of technical terms helps to "define the subject matter" (Beauchamp, 1975, p. 58) addressed by the guidelines. Payne (1909) noted that "clarity" (p. 13) is brought about through "the definition and consistent use of key terms" (p. 13). Terms frequently represent concepts. The definition of key technical terms is necessary in order that the reader of documents be able to understand the relationship of such concepts to one another within the theory or guideline.

Sub-questions To Direct Judgements

Each of the questions making up the criteria for making judgement about the statements gathered through the broad analysis represents an intersection of a values concept with a design, process or evaluation concept.

- 2.a. How are the stated goals of the curriculum reflected in statements giving direction to the design or organization of the curriculum.
- b. How are statements on content sources for the curriculum reflected in statements giving direction to the curriculum's design or organization?

- 2.c. How are statements on the accepted views of the nature of learners and/or learning reflected in the statements giving direction to the design or organization of the curriculum?
- 3.a. How are the stated goals of the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?
- b. How are statements on the content sources for the curriculum reflected in statements giving direction to the processes for development and use of the curriculum?
- c. How are statements on the accepted views of the nature of learners and/or learning reflected in statements giving direction to the processes for the development and use of the curriculum?
- 4.a. How are the stated goals of the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
- b. How are the statements on the content sources for the curriculum reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?
- c. How are the statements on the accepted views of the nature of learners and/or learning reflected in the statements giving direction to or criteria for the evaluation of curriculum decisions?

Procedures for Application of Criteria to Guidelines

A review of literature led to the generation of a number of criteria (questions) to be directed to documents purporting to express a curriculum theory or curriculum guideline. The questions act as a "conceptual framework" (Frye, 1957, p. 15) for examining such documents for they represent the "organizing or constraining forms" (Frye, 1957, p. 15) of a curriculum theory. In essence, they are generalizations about curriculum theories and not the organizing form of any one theory in particular. They represent "factors external to the content" (Gagne, 1978, p. 8) of a theory yet factors that influence the generation of a theory or guideline. Since the questions represent generalized concepts of what a curriculum theory or guideline ought to include they permit the evaluator of theories and guidelines to make judgements "without distortion or oversimplification" (Kelly, 1975, p. 103) of the content of such materials. As such, the questions act as "norms" (Taylor, 1961, p. 104) that are appropriate and valid due to their source (that being the collective wisdom of experts addressing the topic of curriculum theory criteria). Furthermore, the questions are appropriate because they accommodate the "pluralism" (Willis, 1975, p. 9) found in curriculum as a field of study.

The set of questions and a set of sub-questions were generated to conform to the two-step process involved in content analysis as outlined by Gibbons (1977), Freeman (1978), and Hopkins (1980). The first step in the content analysis procedure is to direct the questions to the document(s) under review in order to identify all statements satisfying the concept

of a curriculum guideline. The questions making up the criteria for this step are intentionally broad in order to prevent premature rejection of certain statements included in the documents - that is, rejection of statements before a more refined or critical judgement can be made of them. Once all statements satisfying each of the questions are culled from the documents under review the second set of criteria (sub-questions) can be applied to them in order to make more refined judgements about their appropriateness or validity.

The second step in the content analysis process requires the directing of questions (sub-questions) "unflinching" (Carney, 1972, p. 6) to the statements gathered through the broad analysis. Consistency in approach is facilitated because the sub-questions used in the second step each bring together two concepts thereby making the description of the content of intended responses more complete. The questions permit the intended network of connections between and among concepts expressed in the theory or guideline being reviewed to emerge and be examined as suggested by Gibbons (1977) and Posner (1978). A response to a question in this stage of the analysis represents, as suggested by Kelly (1975), a "judgment or verdict" (p. 101) that the particular statement is appropriate for inclusion in the guideline because it relates to a stated value, "the reason or reasons for the judgement" (p. 101) and it satisfies a "norm" (p. 101) established through the relationship of the criterion or question to a generalized concept of a curriculum theory.

Judgements - 1. Statements appearing in the guideline that do not satisfy one or more of the questions used in the broad analysis step are not pertinent to the essence of the guideline. (Such statements may

simply be neutral or related to the guideline in a supportive or non-essential way.)

2. Statements appearing in the guideline that satisfy the second, third or fourth of the criteria in the broad analysis step but do not satisfy the first criterion are judged as irrelevant because they do not follow logically from the stated values position of the writers of the document(s) being reviewed. Such statements do not truly guide curriculum decision-makers in a consistent way for they tend to confuse the reader rather than clarify the processes involved in developing, using or evaluating the curriculum.

3. Responses to sub questions (as found in statements judged to be pertinent) express the meaning or intention of the guideline.