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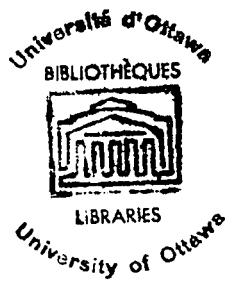
THE DEVELOPMENT OF A CONCEPTUAL SYSTEM FOR THE OPEN CLASSROOM

by Richard L. Butt

Thesis presented to the
School of Graduate Studies of the University of Ottawa
as partial fulfillment of the requirements
for the degree of Doctor of Philosophy



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CURRICULUM STUDIORUM

Richard L. Butt was born in Gloucester, England in 1943. He received his Certificate in Education in 1966 from St. Paul's College, Cheltenham, England which is an affiliate of the University of Bristol. In 1970 he was awarded the degree of Bachelor of Education (Great Distinction). In 1971 he completed studies for the Diploma in Educational Administration and in 1972 received the degree of Master of Education. The B.Ed., Dip. Ed., and M.Ed. were all granted by the Regina Campus of the University of Saskatchewan. The title of the Master's Thesis was "School Organizational Climate and Student Creativity."

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CHAPTER I

INTRODUCTION

Background

Beauchamp (1975, p. 34) illustrates "the failure of scholars in education to introduce the rigors of sound theory building to the set of events attributable to the field of education," and details specific inadequacies in general educational theory (pp. 39-42). In the subfields of curriculum and instruction, Babin (1973), Beauchamp (1975, pp. 181-184), Bruner (1966, p. 31), Hosford (1973, p. 5), Myers (1970, p. viii), and Unruh (1975) underline the lack of theory and offer remedies. Attempts to improve this situation have not met with enthusiastic support.

> Early leaders in the effort to call the attention of educators to the significance of theory in education were amazed and disappointed to find unexpected ignorance, indifference, and even hostility to learning more about the meaning of theory (Unruh, 1975, p. 61).

It is not surprising, therefore, that little attention has been given to the integration of the findings of educational studies into an enlarged and effective body of educational theory (Hilliard, 1971, p. 41). This continuing lack of and resistance to theory is dysfunctional,

since ultimately the purpose of theory in education is to provide an answer for the fundamental question that each teacher should pose: Why am I doing this with the children? Gordon (1968, p. ix) underlines this need.

> Out of the morass of modern curricular and instructional innovations of every kind and variety, teachers and supervisors are asked to make some selective decisions. They feel at a loss in trying to make these educational decisions, because the new programs...do not seem based on consistent undergirding theories.

Peters (1965) observes that, to allay this confusion, teachers must make their own professional decisions on a sound theoretical base. As Gibbs (1972, p. 12) says, theory is of optimum use when it is directed to basic issues, controversies, and problems in a field of study.

Peters (in Dearden, 1968) pinpoints primary education in particular as an area within which teachers' efforts to convey the secret of their success to others has never done justice to their practice. "Indeed, the theory of primary education is more studded with slogans arising from an unexamined ideology than any other (p. vi)." Within primary education the approach which continues to be the focus of most of the debate is that of the informal or open classroom. Despite many years of practice, proponents of the open classroom still function in the absence of "systematic theory" (Walberg & Thomas, 1971, p. 70).

There are many descriptive, anecdotal, and practical accounts of the open or informal classroom and some recently developed operational frameworks exist, but there is no coherent explicit theoretical framework which parsimoniously unifies and explains the phenomenon (Barth, 1972; Bennett, 1975, pp. 29-31; Dearden, 1968; Peters in Dearden, 1968, p. vi; Walberg & Thomas, 1971, p. 70). This lack of theoretical

identity gives rise to many serious problems:

1. Confusion as to what the key concepts within the phenomenon of the open classroom are, and what interrelations are supposed to exist.
2. A failure to clearly identify for what and for whom the open classroom is best suited.
3. The lack of template for dissemination and implementation, resulting in misinterpretation and misapplication.
4. An inadequate framework for enunciating questions and for considering problems about the open-classroom approach to education.
5. An absence of guidelines and criteria for appropriate research paradigms and designs.
6. A lack of criteria for evaluation.
7. The perpetuation of emotional polemics as the main mode of debate in assessing the advantages and disadvantages of the open classroom.

Bennett (1975, p. 7) notes that misinterpretation of the open classroom is rife. Even his own recent research findings have been misconstrued. He observes that the problems of open classrooms are complex and require that evidence be presented and evaluated objectively. A coherent theoretical framework is essential to this endeavour.

The assessment of research on the open classroom and the integration of findings into a valid body of knowledge are seriously hampered by the lack of common variables. Furthermore, many studies which apparently utilize the same variables differ in their definitions (p. 29). This lack of rigour (Travers, 1971) has given rise to crude studies which

offer impossible comparisons and little help in solving problems. It is quite possible, given the varying ranges of openness, crude independent variables, and differing mid-point splits in research designs, that the hypothetical optimum treatment of the open classroom for a particular group of students might fall on opposite sides of the design for different studies. As Stones (1973, p. 18) states: "Spurious consensus is inevitable if the one word means all (and different) things to different people." Rosenshine and Furst (1973) aptly describe this type of research as dust-bowl empiricism.

> It must be obvious to the critical reader that what is missing from many reported studies is the sense of direction and controlled orderliness which can only be provided by adequate theory (Nuthall, 1968, p. 126).

Nuthall then goes on to express the opinion that stretching old psychological theories is of little value. What is required, he feels, is the creation of new theory which arises directly from the natural grain and detail of the behaviour it is supposed to explain. This is what Glaser and Strauss (1967, pp. 1-3), working on the field of sociology, describe as grounded theory. This type of theory is called for by Zimiles (1973) who stresses the need for a conceptual framework which allows for comparison of what one sees in a classroom with ideas about the potential impact of these conditions on the child. In reviewing the problems of evaluating the impact of the open classroom, Stodolsky (1975, p. 116) emphasizes the necessity of a theory which would permit inferences about the potential of an educational environment on the child.

Part of the responsibility for the current confusion must be attributed to many proponents of the open classroom who have resisted

attempts to develop theoretical frameworks which explain it. It is felt that the open classroom is "founded on contingency and uniqueness" (Walberg & Thomas, 1971, p. 7) of the situational Gestalt among child, teacher, and materials, It is argued, therefore, that is not possible to develop a theory which provides a fair representation of the approach; indeed, it is more likely that misrepresentation would occur. This abdication on the part of practitioners to develop explicit theory has left to others the opportunity to misinterpret; and as previously noted, confused research continues, using paradigms which are distasteful to open educators. As Walberg and Thomas (1971, p. 8) state, open classroom teachers do not operate in an ideological vacuum. "They seem to bring to each decision a set of shared attitudes and convictions about the nature of childhood, learning and schooling." So it should be possible to make these explicit, and build them into a useful conceptual framework. Therefore this study intends to develop a conceptual system for the open classroom.

Related Literature

This section examines literature which pertains directly to the development of theory for the open classroom. It will present elements of theory explicit in the literature so as to indicate, in general, what next steps are necessary in theory development. The substance of this literature and other writings on the open classroom will be analyzed in depth throughout the main portion of this thesis.

Literature pertinent to any form of theory development for the open classroom is meagre. Barth (1970, 1972), Bussis and Chittenden (1970), Rathbone (1972), and Walberg (1971) examine the open classroom

from a theoretical perspective.

Barth (1970, 1972, p. 21-29) assembles the main assumptions underlying the open classroom and identifies twenty-eight assumptions pertaining to the nature of the children, learning and knowledge. Bussis and Chittenden (1970) had difficulty in articulating the teachers' part in the open classroom. Therefore, they spent considerable time examining the teacher's role. They identify ten themes which characterize aspects of the teacher's activities.

Rathbone (1972, p. 527) distills what might be called a minimum set of thirteen "intended learning outcomes" for the open classroom which emphasize personal efficacy rather than knowledge of subject matter. These are regarded as the general goals of the open classroom.

From the literature on the open classroom Walberg and Thomas (1971) examine several categories of writers in an attempt to arrive at an operational definition of the open-classroom approach to education. Their comprehensive efforts generally substantiate the work of Bussis and Chittenden (1970) whose ten themes of teacher role characteristics they modify to eight. Similarly, they slightly extend, combine and modify Barth's (1972) twenty-eight assumptions to eighteen.

The above efforts identify aims, assumptions, and operational themes for the teacher. These writings are useful in that they facilitate variable identification and the classification of data regarding the open classroom, besides being the source of elemental hypotheses; however, no attempt is made to identify useful concepts, constructs, and to speculate as to relationships that might or should exist among them. These existing elements of theory represent

rudimentary levels of theorizing (Boring, 1963, pp. 210-225; Snow, 1973, pp. 82-86). They still do not constitute a coherent conceptual framework which unifies and explains the phenomenon of the open classroom which is the next form of theory appropriate to develop. Thus, the focus of this thesis is to make a contribution towards conceptual theory which is characterized by Snow (1973, p. 84) as a set of hypothetical constructs and relationships, perhaps speculative in nature, in combination with known and defined concepts.

Having examined the literature pertaining to theory for the open classroom, and ascertained the next step in theory development, the problem which this thesis addresses can be more clearly delineated.

The Problem

In essence, the problem that this study engages is the development of theory pertaining to the open-classroom approach to education.

The minor research questions for this study are:

1) Do elements of theory pertaining to the open classroom exist in the literature?
2) If so, what are these elements?
3) In what form do they exist?

The major research question is:

4) Can these elements be synthesized and/or extended to form a conceptual system for the open classroom?

Approach to the Problem

In order that this study can be viewed within the broader context of educational studies it is necessary that the approach to the problem include a brief philosophical stance from which it emerges, as well as a coherent and interrelated vocabulary of meanings for the common macro-constructs of education (after Hosford, 1973, p. 15).

Philosophically speaking this research regards any individual's general purpose in life as being to relate positively to the macrocosm, to make as much sense out of the apparent chaos of the universe as possible. In order to achieve this purpose the individual continually interacts with the macrocosm, constantly attempting to improve the quality of this interaction and its products as judged by the criteria of the individual's own value system.

Definitions

The following definitions are stipulated for the common macro-constructs of education:

1. Education (Process) - is the development of individual and social meaning, together with the development of the process for generating that meaning (adapted from Hosford, 1973, p. 26).

2. Education (Product) - is all learning which has individual and social meaning (Hosford, 1973, p. 26).

3. Learning - is a change in the potential for behaviour or change in behaviour.

4. Curriculum - is a structured set of intended learnings.

5. Instruction - is all activities and experiences designed to facilitate learning (adapted from Hosford, 1973, p. 26).

6. Teaching - is the behaviour of a person directed to the learner in order to facilitate learning (adapted from Hosford, 1973, p. 27).

These definitions imply:

1. Education is a subset of learning.

2. Teaching is a subset of instruction.

In reality, all teaching or instruction does not necessarily result in learning or education therefore:

3. Some instruction results in learning.

4. Some instruction results in education.

5. Some teaching results in learning.

6. Some teaching results in education.

Curriculum is regarded as a unity of means and ends in that some intended learnings facilitate, that is, are means for, subsequent learnings; therefore:

7. Some curriculum is instruction.

Figure 1: illustrates the above relationships and the crucial concern of the classroom.

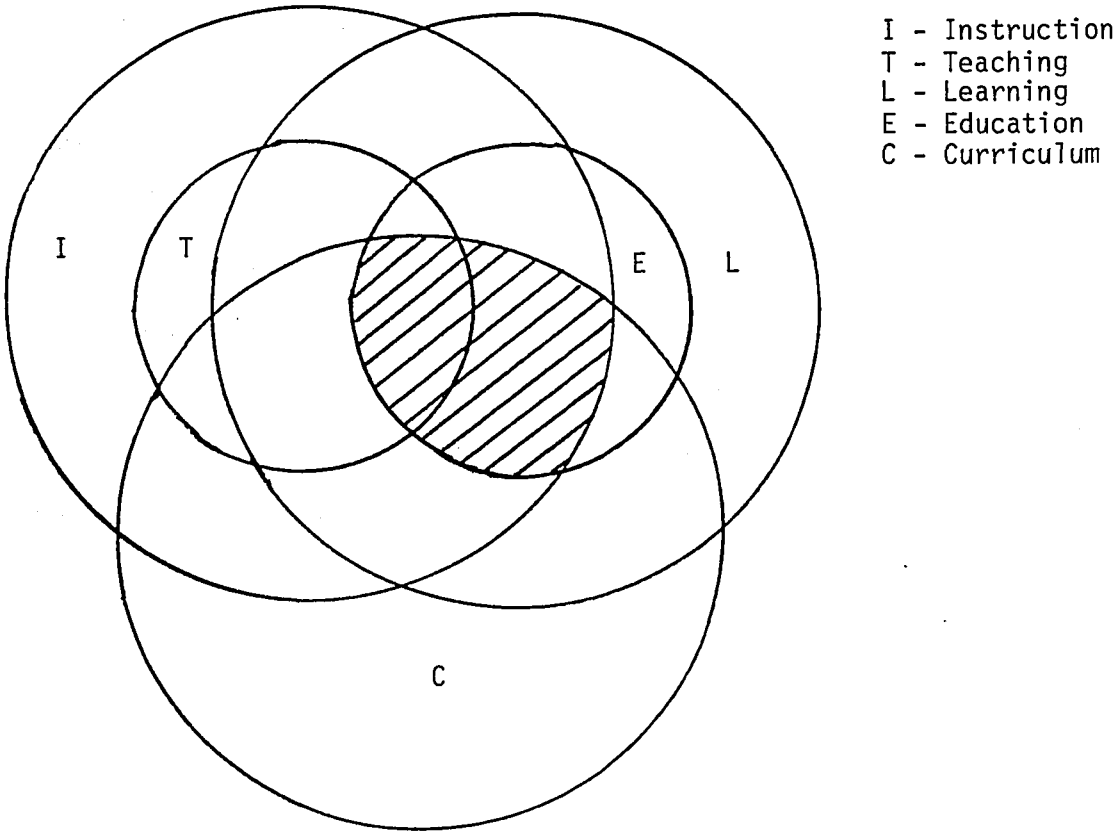

Figure 1: Diagram indicating relationships between instruction, teaching, learning, education, and curriculum.

The shaded area represents that learning which is education (has individual and social meaning) which is part of the intended curriculum and which has resulted from instruction (including some teaching). This area then is the crucial concern of the classroom which it attempts to maximize.

Having stipulated the context of the discipline of education within which this thesis is developed, it is now necessary to characterize the open classroom as an approach to education.

The Open Classroom

The foregoing framework is probably general enough to take account of many varied educational ideologies, one of which is that of the open classroom. Differences begin to evolve when one asks the following questions: Who designs the curriculum and how? What is the substance of the curriculum ? What style does the teacher use? What activities do the students undertake? Within what type of environment is instruction conducted? In other words specific ideological aims, values, and therefore means, all of which may fall within the general definition of education given previously, necessarily characterize different approaches to education.

This research proposes to accept the definitions of education (process and product) given previously, as the general goal of the open classroom but as ideologically characterized by Rathbone (1972, p. 527) as follows:

1. The child will take responsibility for his own decisions and actions.

2. The child will be autonomous, acting and making decisions independently.

3. The child will have the ability and desire to set his own goals.

4. The child will possess self-discipline and will not need externally applied discipline.

5. The child will learniself-direction as a basis for organizing his life; he will be self-actualizing.

6. The child will have a capacity for long-term involvement at learning tasks of his own choosing.

7. The child will possess a willingness to experiment; he will demonstrate an ability to seek new solutions and new problems.

8. The child will have self-confidence.

9. The child will exhibit trust in himself and others.

10. The child will feel free; he will be socially and intellectually adaptable.

11. The child will feel comfortable with and confident of his own learning processes.

12. The child will be in touch with his own inner impulses: he will not fear fantasy or feeling.

13. The child will value the ethic of open education.

It is necessary, here to characterize the means for reaching the above goals since it will be the concrete referent for this study. This referent is the live open classroom. Since part of the object of this thesis is to further identify and define the open classroom, a conceptual definition would not be appropriate at this point, however, the open classroom can be described as follows:

> ...It is characterized by openness: door are ajar, and children come and go: classrooms are open, and children bring objects of interest in and take objects of interest out, space is fluid, and not pre-empted by desks and chairs organized in rows or in any permanent way; a variety of spaces are filled with a variety of materials; children move openly from place to place, from activity to activity. Time is open, to permit and release rather than constrain or prescribe. The curriculum is open to choices by adults and children as a function of the interests of children.

> The curriculum is the dependent variable, dependent on the child, rather than the independent variable upon which the child must depend...In short, open education implies an environment in which the possibilities for exploration and learning of self and of the world are unobstructed (Barth, 1972, p. 56).

Type of Theory

Having briefly described the phenomena towards which this study is directed, it is now necessary to consider the type of theory which is most appropriate for the open classroom. Accordingly, this section will develop broad parameters for the type of theory towards which the conceptual system is aimed. More specific details of the procedure for developing the conceptual system will be explicated in Chapter II.

Glaser (1976, p. 4), Bruner (1964), and Hilliard (1971, p. 43) attempt to distinguish between theories of pure and applied disciplines. Theory in pure disciplines explains natural phenomena and is termed descriptive, whereas theory in applied disciplines, which attempts to state and explain the best course of action to reach certain goals, is called prescriptive. Maccia's work in educational theory also reflects an interest in the descriptive/prescriptive classification but moves on to a more detailed taxonomy of subject matter of theory. She suggests four classes of theory which seem particularly useful for applied disciplines. Maccia's (1965, p. 4) categories of theory are: formal, event (or reality), valuational, and praxiological. Formal theory is speculation with respect to structure of major aspects of a discipline or field of study. For example, the question of whether curriculum is a subtheory of instruction or vice-versa

would fall into this category. Event theory is concerned with the description and explanation of natural phenomena - as we find for events in physical science. This class of theory seems to correspond to descriptive theory but is better named: the term descriptive misleads in that it forgets the more valuable explicative function. Event theory would seem to utilize science as a main epistemology. On the other hand, valuational theory, which is speculation as to worthwhileness, would appear to emphasize what has been described as philosophical theory. The final class is praxiological theory which is "speculation as to appropriate means to attain what is taken to be valuable" (Maccia, 1965, p. 4). This category seems to correspond to the prescriptive aspect of educational theory.

Since this study accepts the goals of the open classroom as derived by Rathbone (1972, p. 537), the conceptual system will focus on means for attaining these ends. Thus the class of theory which this study will primarily engage will be praxiological. The need for "grounded theory" (Glaser & Strauss, 1967, pp. 1-3; Nuthall, 1968, p. 126) in education generally and for the open classroom in particular (Stodolosky, 1975, p. 116; Zimiles, 1973) has been noted, so that the conceptual system will attempt to reflect the natural grain and detail of the behaviour it is supposed to represent. Having discussed the type of theory or theorizing appropriate for the open classroom, the question now arises as to how this should be developed.

Method

There are two crucial aspects to the development of a conceptual system for the open classroom. Firstly, the process of theorizing; secondly, the substance with which one theorizes..

Glaserand Strauss (1967, pp. 1-2) consider that developing theory inductively from qualitative and quantitative data (p. 17) is the best initial approach to theory development rather than a philosophical deductive procedure. They feel it is more likely to produce results which fit, describe and explain reality, being of practical use for the field via its intimate link with the data. Since this study represents initial stages in theory development for the open classroom, it is considered that an inductive approach from qualitative and quantitative data is an appropriate procedure to utilize. Qualitative data will be emphasized since it is readily available but more importantly because it is a better source of concepts for a conceptual system. Essential for the above approach is a systematic procedure for examining the data (p. 18) to ensure quality of outcome and replicability. Therefore a fundamental task of this study will be to develop a detailed procedure for theorizing.

The substance with which one theorizes is of parallel importance to the process of theorizing; as Stinchcombe (1968, p. vi) notes, "induction in the domain of theory depends on selection of materials to analyze." Therefore, a second fundamental task of this study is to develop a system for selection of writings pertinent to the open classroom from the existing literature. The third fundamental task is to integrate the substance and process for theorizing into a replicable procedure which will guide the development of a conceptual system for the open classroom.

Purpose

Having identified the problem which this thesis will address and

having outlined the approach that will be followed, it is now possible to formally state the purpose of the study, which is to develop a conceptual system for the open classroom. This conceptual system may be represented by a model. Since the system will focus on the means (open classroom) to reach the agreed ends of the open classroom (Rathbone, 1972, p. 527) it will fall mainly within the class of praxiological theory (Maccia, 1965, p. 4). In methodological terms the study will use an inductive approach, analyzing in a systematic way qualitative and quantitative data selected from the literature pertaining to the open classroom. Existing and new elements of theory which emerge from this analysis will be fashioned into a conceptual system. The direction of theory development represented by the building of this conceptual scheme is towards grounded theory (Glaser & Strauss, 1967, pp. 1-3) and conceptual theory (Snow, 1973, pp. 82-86).

A conceptual system is defined as a framework designed to identify and reveal relationships among complex interrelated and interacting phenomena (Goodlad, 1966, p. 3). A conceptual model is defined as a diagram which represents the conceptual system.

Functions

Intended functions of the conceptual system were derived from the needs of the open classroom indicated earlier in this chapter. The system will: explicate the open-classroom approach to education; identify its key concepts and their interrelationships; provide a template for its dissemination and implementation; act as a framework for considering problems of the open classroom; facilitate valid research, evaluation and development; and minimize misinterpretation and misapplication.

Delimitation of the Study

1. This study is primarily focused upon the praxiological aspects of the open or informal classroom.
2. The main substance which this study will consider will be writings selected from literature pertaining to the open or informal classroom as detailed in Chapter II. This selection, however, is not meant to preclude other pertinent citations justified by the context within which they are quoted.
3. This study is not concerned directly with the many educational innovations which may or may not be associated with the open or informal classroom, such as individualization, continuous progress, and free schools.
4. The broad level of education considered appropriate for this study at this time is nursery school through grade 6; that is, children whose ages range from four through twelve. It must be noted that this is a preliminary delimitation and that the study should more carefully examine the age range appropriate for an open or informal classroom approach.
5. The minimum aim for this study is a conceptual system for the open classroom, however, this does not preclude that this conceptual system may reach the level of theory. The question as to how a conceptual system can be judged to be at the level of theory will be addressed in Chapter II.
6. This study represents an effort toward the development of theory for the open-classroom approach to education. Therefore it is not theory development solely in any of the separate macroconstructs of education such as teaching, instruction, curriculum or learning,

but rather the dynamic interaction of them all, which is the main concern of the education enterprise (see Figure 1, p.10). Therefore this study does not consider explicitly, specifically, or separately the notions of curriculum, instruction, teaching, and learning as they apply to the open classroom.

Assumptions

1. It is assumed that there are no ideological or empirical differences between the open classroom and the informal classroom. It is felt that this is a reasonable assumption to make in view of the constant ideological interchange between proponents and practitioners of the open and informal approach to education in Britain and North America. Further, Evans' (1971) study which observed both informal classrooms in Britain and open classrooms in North America detected no significant differences in classroom transactions in the two countries.
2. It is assumed that the objectives of the open-classroom approach to education are validly represented by Rathbone (1972, p. 527).
3. It is assumed that no explicit coherent theoretical framework exists for the open classroom. In view of the examination of the literature pertaining to theory development for the open classroom (p.5) this is regarded as a valid assumption.
4. It is assumed that elements of a theory for the open classroom do exist in the literature selected for this study.

Limitations

1. This study is concerned with a conceptual system which is a general framework (Goodlad, 1966, p. 3) designed to facilitate more

in-depth study of specific areas. Therefore, bearing in mind the massive amount of literature, and multiple events which make up the phenomena of the open classroom, this study is limited in that it will not be possible to examine each event, concept, or construct, in depth. It is hoped that the benefits of a general map as represented by the conceptual system will better provide for the in-depth study of specifics and thus offset any necessary superficiality required by the large scope of this study.

2. The current status of theory development in education inevitably limits this study in several ways:

   a. Education in general currently manifests what might be called a "natural history stage of theory" (Gibbs, 1972, p. 36) which consists of observing, classifying and labelling of events, things, and phenomena. Terms and concepts have been borrowed from other fields. The problem that remains is that many terms are undefined within the context of education, furthermore, many concepts may have little or no empirical validity.

   b. The results of this study will be limited insofar as there is not a state of "normal science" (Kuhn, 1970, pp. 10-34) in education, since there are neither well accepted theories nor established paradigms of inquiry within the discipline.

3. In an effort to systematize the analysis of qualitative data, a procedure for theorizing and for selecting literature appropriate for this study is developed in Chapter II. These details ensure that the study can be replicated. There are, however, several points with regard to this procedure that may limit or strengthen the study.

a. Inasfar as possible the procedure was developed a priori to guide theory development and avoid haphazard analysis. However, as Glaser and Strauss (1967, pp. 45-47) point out, "the process of collecting data is controlled by emerging theory" -- it points to the next steps. Needless to say, the initial decisions in each phase of theory development are guided by the perspective of the general procedure given in Chapter II. The further development of that procedure, as theory emerges, is designed to be a strength; however, it could be a limitation if it permits haphazard and unsystematic analysis.

b. Always within the realm of a logical scientific approach to a problem there is a vital and creative role to be played by insight, intuition, and serendipity. Both Glaser and Strauss (1967, p. 251) and Stinchcombe (1968, p. v) extol the values of these phenomena as a source of theory. Nevertheless, despite the fact that the procedure developed for this study is both structured and flexible to guide and permit intuition and insight, that flexibility could be a potential limitation both in terms of outcome and replicability.

Organization of the Thesis

The purpose of this first chapter has been to present the reader with an overview of the problem, and the broad approach to be taken in this study.

Chapter II will give a detailed development of the procedure for theorizing that will be utilized in this study, together with the method that will be used for selecting appropriate literature to analyze.

Chapters III, IV, and V are concerned with the development of the conceptual system for the open classroom utilizing the procedure outlined in Chapter II. These chapters represent different phases of that procedure. Chapter III, the exploratory phase, constitutes the establishment of the set of events and phenomena on which the conceptual system will be focused, together with the analysis of literature which offers potential concepts for inclusion in the conceptual system. Chapter IV, the integrative phase, will search for concepts which unite and integrate the notions which emerge from Chapter III. Chapter V, the formal phase, constitutes a formal exposition of the conceptual system. In Chapter VI, the thesis will be summarized and assessed in terms of implications for the study and practice of the open-classroom approach to education.

CHAPTER II

PROCEDURE

Introduction

The purpose of this chapter is to develop a detailed procedure for the development of a conceptual system for the open classroom, within the general guidelines outlined in the previous chapter.

There are two major facets of this procedure: firstly, the substance with which one theorizes; secondly, the process by which one theorizes. The first section of this chapter will therefore consider the selection of writings pertinent to the open classroom which this thesis will analyze. The second section will consider the process of theorizing appropriate for this study. The third section will integrate substance and process into a procedure which will guide the development of a conceptual system for the open classroom.

Substance

Since the literature pertaining directly and indirectly to the open classroom is copious, it is necessary to develop a system for

obtaining a representative and appropriate sample of writings for the present study. This section will consider the universe of eligible literature, the aims of selection, the utilization and establishment of categories of literature, and criteria for selection within each category.

Eligible Literature

The universe of literature considered eligible for this study includes the following writings:

1. Those which focus primarily and directly on the informal or open classroom.

2. Those which, though they do not mention the key words informal or open, have been demonstrated by the literature to have influenced the history and development of the open classroom.

Aims of Selection

The magnitude of literature eligible for the study necessitates the selection of a sample. The basic aims of selection are:

1. To reduce the data to manageable proportions.
2. To ensure that writings considered by this study are representative of the openclassroom.
3. To ensure that writings considered by this study comprehensively cover the scope of the open classroom.

Categories

The following categories of literature are deemed to serve the aims of selection outlined in the previous section. They are also designed to facilitate the development of the conceptual system.

The categories are writings which:

1. Describe the live open classroom.

2. Represent the historical roots from which the open classroom developed.

3. Pertain to the development of the open classroom.

4. Attempt to develop operational frameworks for the open classroom from an empirical base.

5. Attempt to discern the assumptions, beliefs, and values inherent in the operation of the open classroom.

Category 1 provides for the establishment of the ground for the conceptual system. The ideological forerunners of the open classroom (Category 2), influences on its dynamic development (Category 3) and operational frameworks (Category 4) provide potential concepts and relationships. The findings which emerge from analysis of this literature together with existing elements of theory and Category 5 writings may offer suggestions as to how the conceptual system can be structured.

Selection within Categories

While the foregoing categories provide for useful classification and selection from the plethora of open classroom literature, there still remains the problem of representative and appropriate selection from within each category.

Category 1: The majority of the material which describes the live open classroom has essentially the same content, therefore, quite an arbitrary choice could be made without jeopardizing validity. The sample of literature used will include many of the most frequently cited sources.

Categories 2, 3, 4: For these categories, a combination of criteria will be used. Walberg and Thomas (1971) attempted to identify and describe the open classroom by rating authors in terms of their emphasis on eight themes which purported to characterize the open classroom. These authors were categorized on the basis of advice of knowledgable personnel and frequency of citation into the following categories: practitioners, advisors, advocates, reporters and observers, analysts and researchers. Authors who were highly rated by Walberg and were eligible for the Categories 2, 3 and 4 were included. Long (1973) examined existential and humanistic psychology as it applied to education as well as historical and developmental aspects of the open classroom. He clearly demonstrated that existing open education classrooms best reflected and fostered the ideas inherent in existential and humanistic psychology. Thus, the joint criteria used to select authors for inclusion in Categories 2, 3, and 4 were frequency of citation and their rating within the Long (1973) and Walberg and Thomas (1971) studies.

Category 5: There is such a limited amount of literature which falls into this category that any example found was critically considered.

Process

The primary aim of this study is to produce a conceptual system which will aid the development of theory for the open classroom. Whether or not the conceptual system reaches the level of theory is not essential to this aim. It is, however, an important subsidiary question, in that, within the notion of theory as an ever developing entity (Glaser & Strauss, 1967, p. 32) it is essential to know how

far one has come and what may be the next step. Thus the objective of this section is to conduct an examination of theory as it pertains to education, and how it may be built. From this will be extracted the most fruitful process of theoretical formulation for the purposes of this thesis.

The following questions will be considered:

1. How may theory be defined?
2. What are the main components of theory?
3. What component of theory is its necessary characteristic?
4. What are the functions and properties of theory?
5. What different forms or levels of theory are there?
6. What activities and processes constitute theorizing?

Defining Theory

Halpin (1966, p. 7) claims that "theory carries the burden of too many meanings." Despite the fact that "There is general agreement that a theory is a set of related statements explaining some series of events" (Beauchamp, 1975, p. 10), the number of potentially different modes of theory building, forms of theory, and types of functions theory is to serve, gives rise to many differences as to what the character of theoretical statements could or should be. Accordingly, samples of the main classes of definitions of theory will be illustrated here, all of which are considered legitimate in appropriate circumstances.

Griffiths (1959, p. 28) defines theory frugally and generally as follows: "A theory is essentially a set of assumptions from which a set of empirical laws is derived." The most frequently cited definition of theory in social science is that of Feigl (1951, p. 182) who expands

Griffiths' statement to emphasize the assumptive nature of theory as compared to empirical laws.

> I propose to define theory as a set of assumptions from which can be derived by purely logico-mathematical procedures, a larger set of empirical laws. The theory thereby furnishes an explanation of these empirical laws and unifies the originally heterogeneous areas of subject matter characterized by those empirical laws. Even though it must be admitted that there is no sharp line of demarcation (except a purely arbitrary one) between theoretical assumptions and empirical laws, the distinction, at least in the sense of gradation, is illuminating from a methodological point of view.

The fundamental characteristics of theory which are unification, explanation and prediction are combined in the following definition by Kerlinger (1973, p. 9):

> A theory is a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting phenomena.

In his definition, Kerlinger also points to the main components in theory: constructs, definitions and propositions. Both Snow and Rose offer other acceptable definitions of theory:

> In its simplest form a theory is a symbolic construction designed to bring generalizible facts (or laws) into systematic connection. It consists of (a) a set of units (facts, concepts, variables), and (b) a system of relationships among the units (Snow, 1973, p. 78).

Rose (1963) in emphasizing the role of hypotheses in the predictive aspect of theory offers the following:

> A theory may be defined as an integrated body of definitions, assumptions, and general propositions covering given subject matter from which a comprehensible

> and consistent set of specific and testable hypotheses can be deduced logically.

A definition which is unique in that it illuminates the role of empirical data, inference, induction, and speculation as legitimate modes in theory development has been formulated by Marx (1963, p. 9) who stated that theory is:

> ...provisional explanatory propositions concerning some natural phenomena. A symbolic representation of (i) observed relationships among independent and dependent events, (ii) the mechanisms which are presumed to underlie these particular relationships, (iii) inferred relationships and underlying mechanisms without any observed data.

The foregoing definitions reflect a certain commonality as well as a variety of different but feasible views ofttheory. It must be noted that none of these definitions pinpoint a particular component of theory which could alone distinguish theory from other logical formulations which have as yet not reached the level of theory. This problem will be discussed following an analysis of the components of theory. Theory will then be defined as it relates to the purpose of this study.

Components of Theory

An initial component of any theory must be the set of events to which it is directed (Beauchamp, 1975, p. 82; Stinchcombe, 1968, p. 4). The identification of the problem or phenomena which the theory is to describe and explain must be done rigorously if the appropriate, complete and coherent portion of reality is to be defined. This set of events or phenomena to which the theory is directed will be referred to in this thesis as the reality base.

Having identified the reality base for the theory there is a need to identify a value base which makes explicit accepted values and beliefs for the theory (Beauchamp, 1975, p. 82). This value base is derived from operational values inherent in the reality base and subjective values inherent in the world view or philosophy of the theorist. This set of values must be internally consistent, and is usually stated within the assumptions of the theory.

The reality base must be appropriate for the problem to provide an optimum target for theorizing within the guidelines provided by an appropriate value base. Absence of these components, according to Schwab (1970, p. 11), would weaken the theory through incompleteness of subject matter and inconsistent or biased partiality of view.

From the varied definitions of theory, the main classes of statements within theory include assumptions, definitions, constructs, and prppositions. Gordon (1968) suggested that the terms of theory fall into three main classes. Firstly, there are primitive terms which cannot be operationally defined. Secondly, there are key terms of the theory which must be operationally defined. Examples of key terms in education could be inquiry, aggression, problem solving, and rote learning. These key terms can be utilized to form propositions which state relations within the theory. The third class is theoretical terms. These cannot be defined directly or operationally but via their relation to other terms which are operationally defined. Examples of theoretical terms are: motivation, cognitive dissonance, and perceptual structuring.

Kerlinger (1973, p. 28) defines a concept as a "word that expresses an abstraction formed by generalization from particulars." He goes on

to define a construct as "a concept which has the additional meaning of having been created or appropriated for special scientific purposes."

Kerlinger (p. 34) illustrated the main components of theory and their interrelationship in diagramatic form (see Figure 2). The concepts C_1 (Self-concept), C_2 (Achievement), and C_3 (Aptitude) have been identified or created as parts of phenomena important for the description and explanation of those phenomena. They therefore become constructs for theory building. An operational definition assigns meaning by specifying operations necessary to measure it; that is, since there is no direct empirical measure of the construct self concept (C_1) an operational definition (C_1) permits an indirect link.

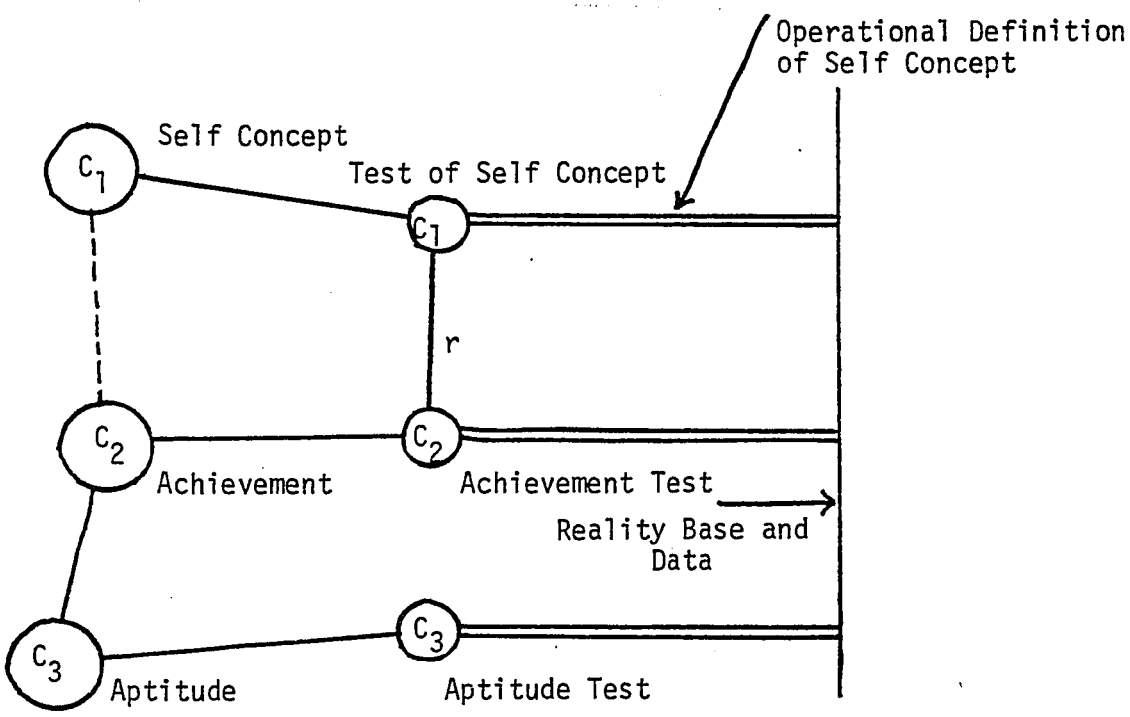

Figure 2: Diagram illustrating the link between theoretical constructs and reality. Adapted from Kerlinger (1972, p. 34).

In the empirical realm relationships (r) may be discovered between operationally defined constructs; thus, relationship between theoretical constructs can only be inferred; that is to say, theory cannot be proved or disproved directly.

Since Kerlinger (p. 8) claims that "the basic aim of science is theory", it is appropriate to examine Showalter's (1969) model of the structure of science which identifies components of theory. Showalter's basic assumption is that science is man's effort to improve order or chaos through organizing the infinite number of objects and phenomena he encounters into a finite number of structures with which he can cope more readily.

Figure 3 illustrates the model for the structure of science, which in a sense duplicates Kerlinger's model but is more comprehensive. Input from the real world through the senses (perceptions) are categorized into real concepts such as "dogness" and "chairness"; these real concepts, in turn, affect perceptions, thus illustrating the two-way functioning of the model. A fact is a sentence asserting a relationship between two or more real concepts. The fourth level of the model for the structure of science is "laws." A law is a statement which is more general than a fact in that is subsumes many facts. It is therefore more powerful than a fact. Laws still have a direct connection to empirical reality but to generalize beyond the level of laws one must enter the domain of true abstraction - this is accomplished by using invented concepts which provide a means of relating previously unrelated phenomena and explaining the laws associated with them. They are abstract with no direct connection with reality; examples of invented concepts are energy, work, velocity,

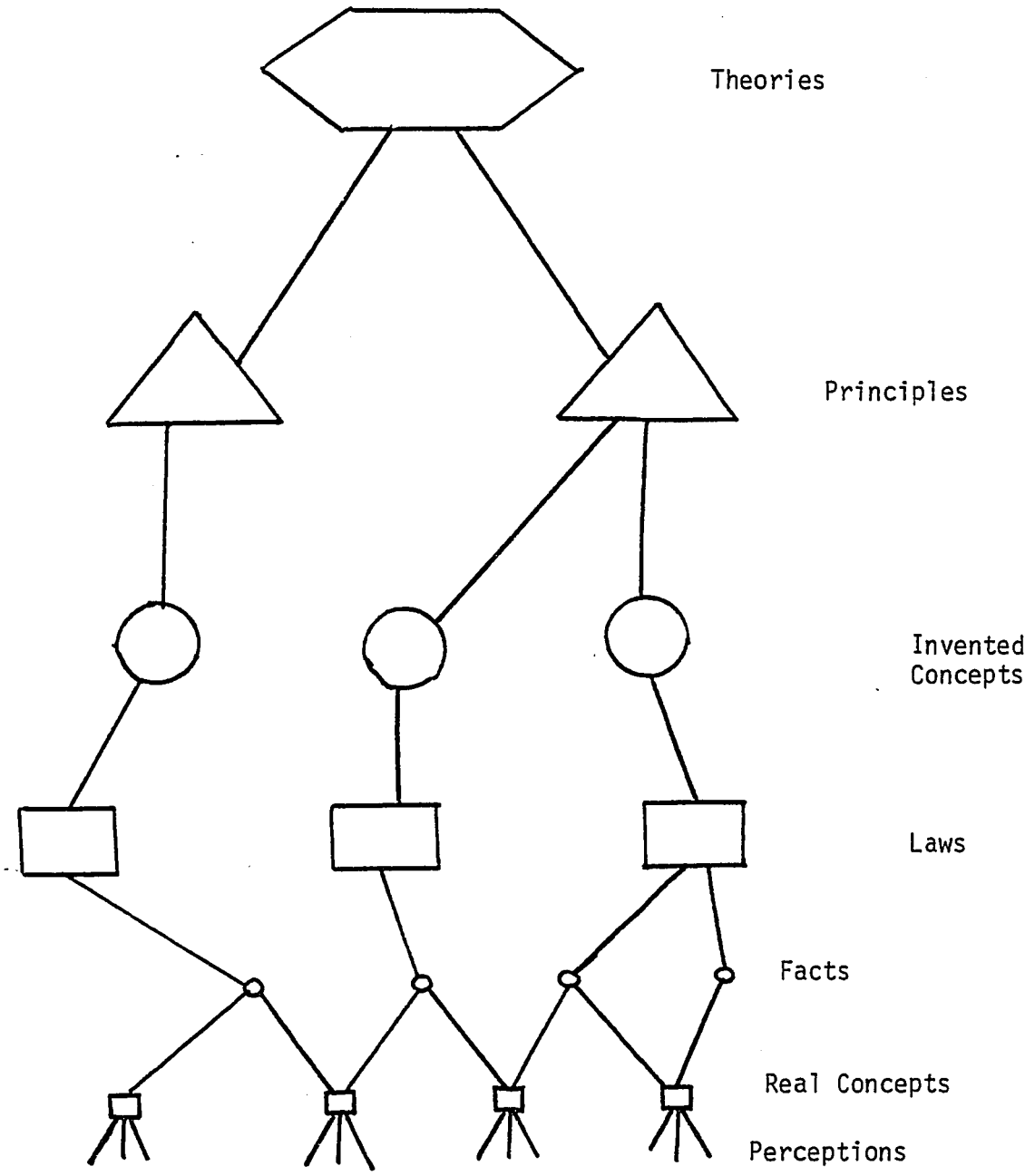

Figure 3: A model for the structure of science. Adapted from Showalter (1969).

and justice. Above the level of invented concepts are principles which assert relationships between two or more concepts, one of which must be an invented concept. The highest level of abstraction is theory, which according to Showalter's model, must contain at least one principle in relationship with other elements of the model. The two-way flow of the model suggests that by induction upwards from the empirical base or by deduction downwards from theory, speculative relational statements or predictions may be generated, in the form of hypotheses.

Gibbs (1972, p. 128 et seq.) followed a similar approach to Showalter for the purpose of illustrating the structure of theory for sociology. He used the terms referents, referentials (laws), concepts, and constructs for components of increasing levels of generality. He goes further than Showalter in that he demonstrates how statements like axioms, postulates, and propositions indicate relations between constructs, between a construct and concept, and between concepts respectively. Whereas Gibbs'treatment of theory building is thorough and detailed, it will not be discussed any further since it reflects the higher forms of theory not appropriate for this study.

The Essence of Theory

It was noted earlier that no current definition of theory really pinpoints a property or component of a set of related statements which attempts to explain a series of events which uniquely characterizes that set of statements as theory as opposed to non-theory.

Raser (1969, p. 6) broadly identifies the pertinent characteristic of theory when he says "theory usually deals with aspects of reality that are not immediately evident to the senses." The jobeof the scientist, writes Kerlinger (1973, p. 34), is to "shuttle backwards and forwards between the level of theory-constructs and level of observation" building valid but indirect links from reality to crucial elements of theory.

Both Halpin (1966, p. 6) and Brunowski (1965, pp. 12, 33) underline that construction of theory demands an act of creative imagination; but it is necessary to search further to unearth what this produces as a crucial element of theory. Brunowski (1965, p. 33) notes that Kepler took a creative step when from data gathered on the movement of heavenly bodies he found order and unity from exploring likenesses. This unity took the form of Kepler's three laws which describe the orbit of any planet. But Kepler's Laws do not explain why planets move the way they do. For this reason Brunowski distinguishes between Kepler's creative step and that of Newton who created a central concept which <u>explained</u> the motion of planets: the concept of gravitation. "The creation was a concept - a connected set of concepts" (p. 34). Brodbeck (1963, p. 59) lists three methods of formulating concepts in theory building: inventing a concept to represent perceived common characteristics; combining old concepts; and inferring underlying states or constructs. Showalter (1969) in his model of the structure of science (see Figure 3) provides a strong formal context for Brunowski's notion of the invented coneept as the crux of theory. Of parallel importance, he distinguishes between different types of concepts, and demonstrates, as does Brunowski, that laws are direct

descriptions of empirical reality and, since they do not explain, are not theory. Kerlinger, as previously mentioned, utilizes the notion of constructs and their interrelationships,as theory, whereby a construct is a concept which has been particularly appropriated or invented for a theoretical formulation (Kerlinger, 1973, pp. 18-34).

In discussing what this section has called invented concepts, Brodbeck (1963, p. 49) observes that:

> The characteristic abstractness of scientific concepts, like mass or I.Q., lies in the fact that these terms cannot be defined by simply listing a cluster of directly observable attributes.

In order to be scientifically useful, that is, form part of a theory, a construct or invented concept must be able to be defined by its relationship to other constructs. Kerlinger (1973, p. 30) calls this constitutive definition. In order to conduct experiments or observations in empirical reality, it is necessary to infer how theoretical constructs (invented concepts) may be measured through operational definition.

From the foregoing deliberation, the necessary characteristic of theory that emerges is the invented concept which is formulated or invented by an act of creative imagination. This type of concept, although it has no direct connection with reality (it is abstract), has strong indirect connection via terms which may be operationally defined. It goes beyond description of real phenomena to explanation. "A theory is nothing - it is not a theory - unless it is an explanation" (Homans, 1964, p. 812) or creates "the capacity to invent explanations" (Stinchcombe, 1968, p. 3). Explanation involves the invention of an abstraction (invented concept) which accounts for, unifies, gives

reasons for, and predicts, phenomena (Gibbs, 1972, p. 13 et seq.; Scriven, 1962, p. 397). For the purpose of this thesis, therefore, a theory is defined as a set of related statements which explain some phenomena and which contains at least one invented concept (construct) related with other operationally defined variables.

The Functions of Theory

Of what functional use is a theory? From a perusal of Beauchamp, 1975; Colardarci and Getzels, 1955; Griffiths, 1959; Halpin, 1966; Kerlinger, 1973; Marx, 1963; Saunders, 1966; Schwab, 1970; Snow, 1973; and Unruh, 1975, the following functions of theory were gleaned: Theory represents a way of making sense out of the apparent chaos of the universe. It searches to expose patterns, relationships, causes and effects within reality. Its major purposes are to unify, simplify, describe and explain phenomena within reality. From this base, the phenomena may be manipulated and controlled and events predicted. For applied disciplines theories desirably guide action; that is, they are prescriptive. MacDonald (1967) maintains that prescription is a neutral attempt to provide an explanation of the way to achieve certain ends.

As a conceptual tool, theory serves as a guide to observation, and enables classification of problems. Contrary to some popular belief, theory is a guide to practice in several ways. Apart from problem identification mentioned above, it provides criteria for decision-making, problem-solving and action. In applied disciplines, it permits consistency of behaviour when serving as a prescriptive model for action.

Whereas the foregoing functions may be viewed as external functions of theory, various internal functions are a necessary prerequisite. In order to provide an optimum target for theorizing a reality base appropriate for the problem must be delimited. In other words, to what phenomena in reality is the theory directed and limited? The theory should make explicit the value base of assumptions, beliefs and values which have applied. All terms should be defined and the components of theory should be related by use of a set of statements which have internal consistency and frugality, that is, they possess maximum comprehensiveness with minimum content. The fact that theory has limits of tenability indicates its functional openness both in terms of the temporary nature of its truth and the potential expansion of its boundaries.

Types of Theory

Halpin's (1966, p. 7) statement that theory takes many forms is borne out when one examines the literature that exists pertaining to the topic.

Gordon (1968, p. 1) speaks of theory essentially as speculation regardless of the popular emphasis that all theory needs empirical validation. But as Maccia (1965, p. 2) points out "It is not the case that theory should be discounted because it is speculation." Griffiths (1959, p. 100) echoes this when he cites the one-time speculative and predictive characteristics of physical science theories which were untestable due to lack of technology to gather data until long after the creation of the theory. Griffiths, however, also makes the point that theory should be testable at some time given appropriate means. So

speculative theory is acceptable, but it is better when it may become empirically based.

Gordon (1968, p. 2) speaks of philosophical and scientific theory. Philosophical theory consists of a set of assumptions from which propositions are derived deductively, which are supposed to have demonstrable validity and internal consistency using logic as a source of criteria. Gordon, however, feels that there is no compulsion to demonstrate the validity of propositions in reality via empirical study within philosophical theorizing.

Scientific theory, on the other hand, is a set of propositions derived inductively from empirical findings. But all theory is conjectural since it goes beyond empirical generalizations. It would seem that most theories utilize what can be called the philosophical and scientific modes of theorizing to differing extents.

A type of theory often spoken of in social science is grand theory or discursive theory, which is reminiscent of much early theorizing. It is characterized by all of the formal parts of the theory, if they can be discerned, being part of a general discussion and analysis. Education has a measure of this type of theory but it is criticized for lack of explicitness, clarity, logic, and testability. It is very difficult to "identify synthetic and analytic statements intermingled with empiricism, discussion, and rhetoric" (Gibbs, 1972, p. 81).

The notion of descriptive versus prescriptive theory has generated much discussion, especially where applied disciplines are concerned. It seems that theory which describes and explains natural phenomena is best termed descriptive theory, whereas theory which intends,

proposes, or advocates certain phenomena as a means of achieving some valued goal is prescriptive, besides any descriptive or explicative function it may serve. Pure disciplines seem to serve the former function while applied disciplines serve the latter. So, as Hilliard (1971, p. 43) says:

> Educational theory like political theory, or theories of engineering, architecture, medicine, dentistry, is mainly prescriptive: it consists in the formulation of a set of principles concerning what shall or shall not be done in education.

To illustrate further: theories of learning have described and attempted to explain how learning can and does take place; however, within the educational setting, a general theory of instruction must prescribe (not in a restrictive sense) procedures for fostering learning (Hosford, 1973, p. 7) and growth towards a valued goal. Beauchamp (1975, p. 36) equates descriptive and prescriptive theory with scientific and philosophical theory respectively.

Maccia's extensive work in educational theory reflected a passing interest in the descriptive/prescriptive classification but moved on to a more detailed taxonomy of subject matter of theory. She suggested four classes of theory which seem particularly useful for applied disciplines; furthermore, these seem to incorporate much of the preceding theory-types within their framework. Maccia's (1965, p. 4) categories of theory are formal, event (or reality), valuational, and praxiological. Formal theory is speculation with respect to structure of major aspects of a discipline or field of study. For example, the question of whether curriculum is a subtheory of instruction or vice-versa would fall into this category. Event theory is concerned

with the description and explanation of natural phenomena, as with events in physical science or history. This class of theory seems to correspond to descriptive theory but is better named: the term descriptive misleads in that it forgets the more valuable explicative function of theory. Event theory, in its empirical base and explicative function, would seem to utilize science as a main epistemology. On the other hand, valuation theory, Maccia's third class, which is speculation as to worthwhileness, would appear to emphasize what has previously been described as philosophical theory. The final class of theory is praxiological theory which is "speculation as to appropriate means to attain what is taken to be valuable" (Maccia, 1965, p. 4), which corresponds to the prescriptive aspect of educational theory.

So far, theory has been taxonomized according to the nature of its substance of theory. The remainder of this section is devoted to taxonomies based on different vehicles for theory. Marx (1965, p. 14) speaks of modes of construction of theory and offers the four alternatives of model, deductive theory, functional theory, and inductive theory (see Figure 4).

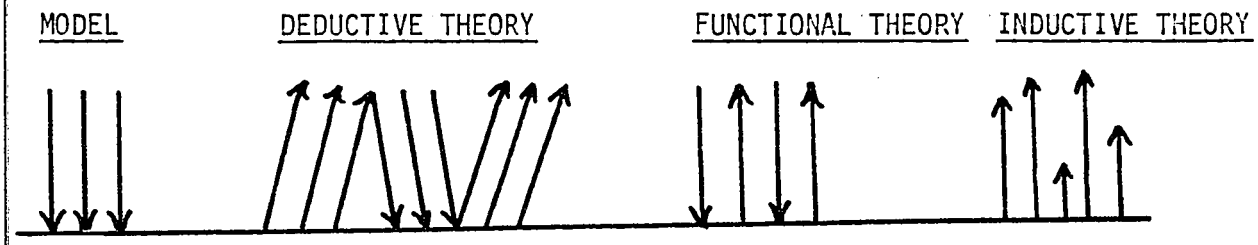

Figure 4: Direction of interaction between theory and data in four types of theory construction (Marx, 1965, p. 14).

Marx (p. 14) defines model as any conceptual analogue which is used to suggest empirical research (hence, the vertical arrows towards reality) its main advantage being the heuristic function it serves in areas devoid of more sophisticated theory. Theory development in the deductive, functional and inductive modes is facilitated by model-based empiricism. Deductive theory, according to Marx, is any logically arranged cluster of laws where there is a distinct emphasis on the conceptual structure and its substantive validity. In Figure 4, the first set of oblique arrows indicates development of theory from empirical data; the downward vertical arrows indicate hypotheses suggested by the theory, and finally, the second set of oblique arrows shows the role that data produced by the theory plays in modifying and improving the theory.

It seems that whereas deductive theory is ultimately concerned with itself, functional theory is a little more loosely knit, with the emphasis on its use as a tool for data manipulation, there being an intimate and continuing interaction between conceptualization and data. This appears similar to grounded theory (Glaser & Strauss, 1967, pp. 1-3) discussed previously as being appropriate for this thesis.

Inductive theory is derived from empirical relationships discovered in reality. It contains a minimum of inferential commitments and deduction.

Snow (1973, pp. 82-86) delineated six grades of theory based on the work of Boring (1963, pp. 210-225). The first he called axiomatic (A) since it was based totally on a set of axiomatic statements from which all other aspects of the theory could be derived. The second

class of theory(B) is partially axiomatic. Conceptual theories and constructions constitute the third group of theories(C) which are characterized by a set of hypothetical constructs, perhaps speculative in nature in combination with known and defined concepts. In short, these consists of conceptual networks in the process of validation much like Kerlinger's model of theory in Figure 2 (see page 30). Also included in Snow's grades of theory are descriptive theories (D) which emphasize description and discrimination that are "basic to the development of conceptual networks" (Snow, 1973, p. 77); elementisms (E) which are empirical or logical attempts to reduce the definition of variables and relationships between them to the most fundamental units possible; and formative hypotheses. (F).Essentially these differing grades of theory are the products of different levels of theorizing (Beauchamp, 1975, p. 13; Snow, 1973, p. 86). The lower levels of theory (D,E,F) represent inductive theory (Marx, 1963, p. 14) which involves simple summarization of empirical data. Functional theory seems to be paralleled by C and B level theoretical constructs in the conceptual network. Snow's grade A theory seems to be Marx's deductive theory.

One other form of theory that must be considered is metatheory, which Snow (1973, p. 79) considers as "theory concerned with the development, investigation or description of theory itself." This writer considers the main sense of metatheory to be the content of this section, that is, speculation about theory <u>per se</u> rather than any particular substance. However, another sense of metatheory involves substance rather than vehicle. It is this meaning that Snow (p. 79)

emphasizes when he talks of many theories being derived from the same metatheoretical base; for example, the family of theories which are derived from stimulus-response or general psychoanalytic theory. This sense of metatheory seems to be similar to Maccia's class of formal theory which considers the basic conceptualization of the phenomena, discipline, or problem area prior to any speculation concerning the actual phenomena.

Processes in Theorizing

Many of the essential processes in theorizing have been implicit in the previous parts of this section. They include: choosing and delimiting an appropriate reality base: stating a value base by stating basic assumptions; developing and utilizing a valid taxonomy for classifying data; identifying and describing fundamental concepts which describe the phenomena; defining as many terms as possible; appropriating and inventing concepts which become constructs and explain the phenomena; demonstrating how constructs are related within a conceptual system which explains and describes the phenomena; developing theoretical propositions which may suggest hypotheses to be tested or predict phenomena.

During all of these activities a theorist should utilize logic, and could take either a deductive or an inductive approach or in appropriate circumstances a combination of both.

Apart from the above processes in theorizing there are two other general schemes which may be of use. Firstly, Beauchamp (1975, p. 14 conceptualized the set of events to be explained by theory as the universal set ABC, with A representing:

> those events of known dimensions, which might be expressed as statements of fact, law, or principle. Subset B, represents those events of assumed dimensions which might be expressed as assumptions, propositions, postulates... Subset C represents those events that are part of the universal, or total, set of events for which adequate explanation is not yet available.

In contrast to the formal process above Griffiths offers useful advice as to how one might commence theorizing (1964, p. 104). His paradigm is as illustrated,

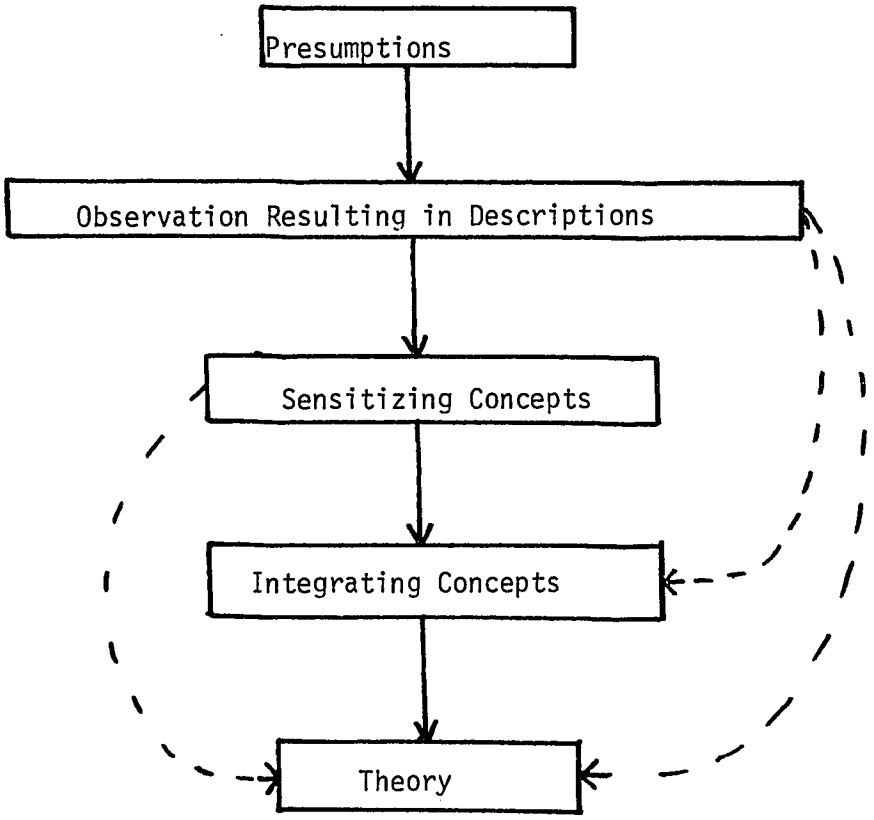

Figure 5: Griffiths paradigm for theorizing.

The paradigm is not meant to be a linear, rigid, or guaranteed sure-fired process but flexible and cyclic. It represents a description of Griffiths' experience in theory building. His paradigm suggests that most investigations are started with some hunches or frame of reference (presumptions), however tentative. The personal observations and descriptions made on the basis of these presumptions give rise to a variety of concepts which may be basically descriptive in character. From these and basic observations it is the task of the theorist to appropriate concepts (constructs) which integrate and explain the phenomena. These preliminary explorations of the phenomena facilitate formal theory development.

Glaser and Strauss (1967, p. 105), in discussing the development of grounded theory, offer four stages:

1. Comparing categories and their properties.
2. Integrating categories and their properties.
3. Delimiting the theory.
4. Writing the theory.

This framework parallels, to a large extent, the advice of Griffiths.

Procedure

Having examined the nature of theory and theorizing as it may apply to education, and specified the substance which this thesis will consider, the question arises as to what specific procedure will be used for developing a conceptual system for the open classroom. Therefore, the purpose of this section is to make explicit the intended procedure for developing the conceptual system. Generally speaking,

the procedure will make use of an inductive approach to grounded theory. Analysis of qualitative data will be utilized together with quantitative data where available, leading therefore, to a mostly speculative product which besides providing for description, and hopefully explanation, should also be prescriptive in nature.

The general procedure is divided into three parts: the exploratory, integrative, and formal phases.

Exploratory Phase

Initial efforts at theorizing in a relatively fresh area are bound to be tentative, informal, and exploratory, not necessarily characterized by formal scholarly rigour since at this stage it is hard to know what to be rigorous about. This phase establishes a preliminary reality base, or metatheoretical base, and explores the literature for sensitizing concepts.

Preliminary Reality Base The initial step in the exploratory phase is to indicate the set of events which is to be the referent for the conceptual system. Reality base may be defined as follows:

1. The set of events, phenomena, and activities on which the conceptual system will focus (Beauchamp, 1975, p. 82).
2. The natural grain and detail of behaviour it (the theory) is supposed to explain (Nuthall, 1968, p. 126).
3. The ground of the theory (Glaser & Strauss, 1967, pp. 1-3).

According to the above, literature valid for establishing the preliminary reality base will describe the live open classroom. This corresponds to Category 1 writings, which are further specified by the following:

1. The role of the pupil.
2. The role of the environment and materials.
3. The role of the teacher (knowledge, facilitation of learning, intervention, relationships, planning).
4. Transactions among them.
5. Day-to-day arrangements and operation.
6. Classroom details of curriculum.

Meta-theoretical Base Secondly, the nature of the reality base should indicate to some extent the metatheoretical base for theorizing both in the sense of type of theory qua theory and type of theory in terms of substance. The metatheoretical base is defined as speculation as to the type of theory envisaged and manner of theorizing to be utilized. Literature valid for this step will include all literature utilized for this chapter on the nature of theory and theorizing.

Identification of Sensitizing Concepts The third step of the exploratory phase will utilize a comparative analysis characteristic of the development of grounded theory. Glaser and Strauss (1967) and Griffiths' (1964) approach was used to enunciate sensitizing concepts which may act as candidates for inclusion in the conceptual system (p. 104). The main body of literature most appropriate for this step includes:

1. Literature pertaining to the ideological vanguard of the open classroom (Category 2). This body of literature is fairly clearly and commonly defined (Walberg & Thomas, 1971; Long, 1973).

2. Literature which represents significant influences on the development of the open classroom (Category 3) as delimited by Walberg and Thomas (1971) and Long (1973).

3. Empirical efforts to develop operational frameworks for the open classroom (Category 4).

The comparison of concepts which emerge from historical antecedents, developmental influences and operational conceptualizations should describe the development of the notion of the open classroom as well as provide for checks of validity of concepts which emerge.

The Integrative Phase

This phase is concerned with identifying the values inherent in the beliefs of proponents of the open classroom which will serve as a guide to concepts which will unite and explain its patterns of events.

Preliminary Value Base This step involves the preparation of a preliminary statement of values, beliefs and assumptions which pertain to the open classroom. Value base is defined as the values, beliefs, and assumptions held by proponents of the open classroom as implicit and explicit in the literature (Beauchamp, 1975, p. 82; Petrie, 1976, p. 11). The literature valid for this portion of the procedure is basically that of Category 5; all available literature in this category will be critically examined.

Integrating Concepts In this step the value base together with the preliminary reality base will guide the assessment of candidate concepts and relationships developed in the exploratory phase in order to identify integrating concepts which unite and explain events within the open classroom. This step involves, therefore, the results of analyzing all selected literature. However, since a major function here is to integrate, extend, and unify existing elements of theory

by borrowing, appropriating, and inventing new concepts, any other literature area indicated by the results of the exploratory and integrative phases can be legitimately considered. This, therefore, cannot be stipulated in advance of conducting those phases.

Formal Phase

The final phase of the procedure involves the more rigourous procedure of the formal development of the conceptual system based on the results of the two preceding phases. It enables the statement of ideas, constructs and relationships garnered from the retrospection allowed by the cyclic nature of the exploratory and integrative phases. This phase should be characterized by logic, and scholarly attention to the formal function and properties of theory delimited. in the previous chapter.

The steps of this phase are indicated in Figure 6 which presents a synopsis of the total procedure for theorizing for the purposes of this thesis.

SUMMARY

This chapter has identified categories of literature which are eligible for analysis in the task of development of a conceptual system for the open classroom. Within these categories, criteria were stated by which writings will be selected.

Bearing in mind the nature of the above substance for theorizing and the nature of theory as examined subsequently, a general procedure which would result in conceptual system for the open classroom was developed. This may represent theory at the conceptual level according to Snow (1973, pp. 82-86) if it contains an invented concept (Brunowski,

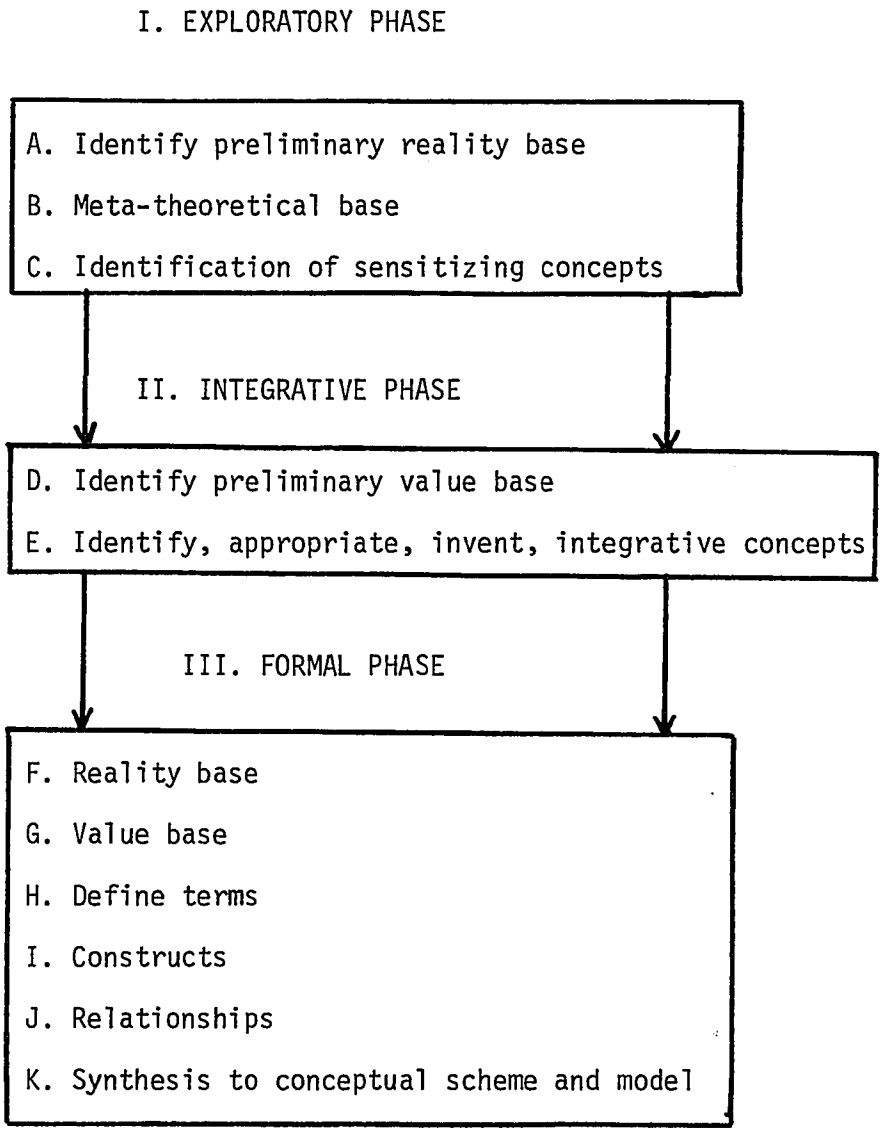

Figure 6: Synopsis of a precedure for theorizing in education.

1965, pp. 12, 33; Homans, 1964, p. 812; Showalter, 1969; Stinchcombe, 1968, p. 3).

It must be re-iterated here, that, while the detailed procedure has been developed in part to provide for replication, it should not be regarded as an accepted paradigm which guarantees an acceptable outcome. At this stage of the development of theory in education few, if any, universally accepted paradigms for theory development exist. Therefore, this procedure is intended as a flexible guide and support system. Thus, not all literature and activities could be specified in advance since the emerging conceptual system may point to the next step, or facilitate theory building by intuition, insight, and s serendipity.

CHAPTER III

THE EXPLORATORY PHASE

Introduction

The purpose of this chapter is to conduct the exploratory phase of the procedure for this study. It consists of the establishment of a preliminary reality base for theorizing, a metatheoretical base which addresses itself to the type of theory and theorizing envisaged, and the analysis of literature pertaining to the historical roots, developmental influences and operational frameworks for the open classroom. The purpose of the latter analysis is to identify sensitizing concepts which may act as candidates for inclusion in the conceptual system for the open classroom.

Preliminary Reality Base

Following the procedure developed in the previous chapter, this section will utilize Category 1 writings to establish a preliminary reality base. The authors selected, therefore, provide concrete descriptions of the live open classroom, and, furthermore, are frequently cited for those descriptions in the literature. An

additional criterion is that each author be or have been a practitioner of the open-classroom approach to education, or, in the case of edited collection of writings, that practitioners should have had a considerable contribution to the work. This criterion aided selection and is thought to improve the validity of description.

The main writers included in this category are as follows: Barth (1972), Blitz (1973), Bremer (1971), Brown and Precious (1973), Hanson (1971), Hassett and Weisberg (1972), Nyquist (1972), Silberman (1973), Stephens (1974), Weber (1971), although several other sources which satisfy Category 1 requirements are also cited. This collection of writings is deemed to provide an accurate representation of the live open classroom.

This section, which develops the preliminary reality base, will consider the open classroom from the perspective of its main elements: the child, the environment, the teacher, as well as how they interact to form a dynamic whole.

The Pupil

Children in an open-classroom setting will typically be quite mobile, not sitting in rows. They form flexible learning groups around common interests or work individually, and arrange their desks or furniture accordingly. The social interaction of the children is therefore quite natural and noticeable as they cooperate, share ideas, discuss problems, or evaluate each other's work (Blitz, 1973, p. 52; Bremer, 1971, Chs. 3,4; Stephens, 1974, p. 26; Tallboy, 1974, p. 9).

From the literature it is evident that the pupil's main transactions, in terms of quantity, are with each other and materials.

It is claimed that each child's active involvement with and investigation of the environment surrounding him (children, things, and teacher) provides for intellectual development and acquisition of basic skills, when sustained and guided by a skilful teacher (Barth, 1972, pp. 59-64).

At any one time, in the classroom, it might be possible to find children discussing, directing, correcting, reading, writing, solving puzzles, acting, counting, playing, painting, constructing, operating audio-visual equipment, caring for plants and animals, conducting experiements, or quietly contemplating (Hanson, 1971, p. 2).

Many other descriptions of open classroom reality are characterized by a wide variety of activities occurring simultaneously, with a high degree of pupil independence. It occurs repeatedly in the literature as perhaps its strongest characteristic. Notable emphasis of this is made in Blitz (1972, p. 52); Bremer (1972, Chs. 3,5); Gross (1970); Hassett and Weisberg (1972, p. 97); Hanson (1971, p. 2); Silberman (1973, pp. 107-108); Stephens (1974, p. 26); Watson (1971, p. 5); Weber (1971, Chs. 1, 2, 4). Perhaps inherent in these passages is the essence of the open classroom. The learning environment provides the freedom and opportunity for children to suggest, initiate and explore their own choice of activities. They plan and implement their ideas based on decisions they have made.

Open educators have claimed that since learning takes place in the child, the child must be the principal agent in his own search for definition and relevance. Therefore, attention must be paid to the child's reasonable wishes in learning; then "he would

be learning in his own way, at his own pace, exploring his own interest, for his own purposes" (Weber, 1971, p. 11). This style of education brings to the child responsibility for himself, his actions and consequences thereof. Weber (1971, p. 93) has described a day in an English informal school to illustrate the child's principal role in the open classroom. The child enters the school as a responsible participant, preparing workshop materials or caring for the animals. Perhaps an investigation commenced the previous day will be resumed without any direction from the teacher. Following a short gathering for morning assembly with the other pupils; the child might work for a short while on specific skills appropriate to his own needs. At some time, the child might join his peers for a scheduled class in movement, music, or physical education.

> After lunch he again met with his classmates and teacher before another period of his own investigation, mixing use of free activities and skills. His teacher might join him at his work - the reading, the acting, the painting, the weighing, discussing it with him in terms of his purposes but also posing new possibilities for trial the next day. Or she might suggest a trial of a new area altogether.
>
> Nearing the end of the day, as he and other children reached the end of their work or a reasonable point of interruption, they began to tidy their work areas knowing that materials not returned to storage centers would not be available for their use the next day. If he finished earlier than the others, he might read, play a quiet game, hold a guinea pig, talk with a friend, or help with another's tidying.
>
> The day might end with the reading of a story or some poetry and a discussion. Thus, a child's day had a rhythm of sustained involvement in his own work, interposed with periods of coming together with his fellows in class and school (Weber, 1971, p. 93).

Other labels or notions sometimes associated with the open classroom are implicit within this example of the child's day. They include individualized education, continuous progress, and activity learning. From the perspective of curriculum teachers might describe what they do as the integrated day, which refers to the fact that there are minimal subject or time divisions in the daily curriculum; or they may refer to the thematic approach which emphasizes learning via broad topics. Vertical family grouping is another variant in organizing for openness, where children of different ages are grouped together for daily activities. These approaches differ somewhat in operational framework and detail, but they all possess the same core which is the informal or open classroom. Weber (1971, p. 11) has operationally characterized the informal classroom as follows:

> Informal as I understand it refers to the setting, the arrangements, the teacher-child and child-child relationships that maintain, restimulate if necessary, and extend what is considered to be the most intense form of learning, the already existing child's way of learning through play and through experiences he seeks for himself.

This subsection has described the role of the child in the open classroom. It was found that the unique child is the focus of activities in the open classroom and is the principal agent in his own learning. The child's main interactions are with other children and the environment as he pursues his own purposes. The next subsection will consider the environmental conditions necessary for this pupil role.

The Environment

In the open classroom, the environment available for learning is vast and diverse. For each child, it includes his fellow pupils, teacher and other adults, together with the social and psychological climate which they and their interactions evoke. The classroom, facilities, furniture, equipment and materials provide physical support for learning, as do natural community resources outside the school (Weber, 1971, pp. 18-30; 81-88). Some open classrooms may have facilities specifically developed for children's learning, there might be special areas built in, such as a model kitchen or French windows which open onto an outdoor learning area. Custom-designed classrooms are not essential, though, for in order to provide many different pupil activities at one time, only a flexible and creative approach to classroom physical arrangements is necessary; many open classrooms have flourished in antiquated school buildings (Weber, 1971, p. 68).

Basically, the classroom is decentralized, with various learning areas or stations for different purposes. Perhaps there will be a workshop area, a mathematics skill centre, a science project and a language centre with a quiet place, with rugs and cushions for relaxed reading. All of this is subject to change as different needs emerge. Open classrooms generally provide access to a multitude of materials brought in by the children and the teacher, from their homes and community, as well as commercial sources. Many individual books are available in the classroom, in addition to those in the library. The classroom may contain a sand or water play area, a place for music or art; it probably is alive with plants, an aquarium, and an animal or two which the children care for and

maintain. The outdoors, in any season, is often used. Features offered might include: planned physical environment around the school, gardening, and field trips to places of potential interest. Many skills and avenues of investigation and expression are utilized such as snow-shoeing, outdoor cooking, art, orienteering, plant collecting and classifying, and visits to factories and museums. All of these are examples of resources outside the school which may be integrated with the ongoing curriculum (Brown & Precious, 1973, pp.17-24; Hanson, 1971, p. 2; Hassett & Weisberg, 1972, pp. 27-32, 41-51; Weber, 1971, pp. 18-30, 114-118).

The psychological environment provides freedom for the pupils to be responsible for themselves, to move, converse and work together, and to express their feelings and emotions. Interacting with each other with open access to materials provides, and is fostered by, an open, warm, relaxed climate. There is an atmosphere of trust and acceptance of children as unique human beings. Flexible time arrangements and the lack of standard expectations for every child reduces stress which further maintains the healthy learning climate (Hassett & Weisberg, 1972, pp. 17-26).

This subsection has described how the environment in the open classroom fosters a child's learning activities. What emerged was that there is a rich variety of materials, decentralized into various learning areas. These are available for individual pupil activities, which are encouraged by the climate of psychological openness and freedom.

The Teacher

In the open classroom, the teacher plays a significant, active

and skilful part; her contribution is essential. This point was made by Blackie (1967, p. 4) in his attempt to characterize or define what the open classroom is about:

> The one essential point in the whole educational system is the point of contact between the teacher and child. It is to make this contact as fruitful as possible that everything else - authority, administration, inspection, curriculum exist. If the system fails to work at this point of contact it fails everywhere.

The teacher is responsible for facilitating, obtrusively and unobtrusively, the roles that the pupil and the environment take in classroom transactions. The multitude of different acts that a teacher may initiate requires that her role be explicated under several headings. In order to function as a teacher in an open classroom it is necessary to develop a fund of knowledge from which one can facilitate learning. Fruitful interactions among children, and between them and the environment, require the teacher to be skilful at initiating activities with the pupils and making useful interventions. These processes require constant planning to maintain the dynamic momentum of the class (Barth, 1972, Ch 2; Hassett & Weisberg, 1972, pp. 108-114; Stephens, 1974, p. 34). The above elements of the teacher's role are discussed in the following pages under separate headings.

Knowledge There is an important knowledge base that a teacher needs to emphasize in order to operate within an open classroom. Its adequacy depends on the process which the teacher has developed for its continuous generation and change. The teacher's preparation at college and continuing professional development will provide some

background here but most important will be the knowledge that the teacher deliberately accrues from the pupils in the classroom. The teacher must know children; how they think, act, feel in ways different from adults. Besides being aware of the developmental stages of childhood, the open classroom teacher is aware of how the society of children works--how they interact with each other, group, separate and isolate each other. Knowledge of each unique child is essential to the teacher-function: the community, socio-economic status, and the family all provide a backdrop from which to comprehend the child's interests, attitudes, values and problems (Butler-Kisber, et al., 1975, pp. 32-33.) The evolving lives of children provide important facts for understanding their behaviour; if a child's family has just been evicted from their home it is not surprising that the child cannot function. It is important to know whose cat has died, and if mother is sick (Weber, 1971, p. 66).

An ongoing awareness of preferred learning style, level of certain skills and readiness, provides the teacher with an idea of when and what to do next. To achieve this, the teacher makes anecdotal records, progress charts, and collects other data (Weber, 1971, pp. 111-114). As a teacher from an inner city infant school pointed out, she could only direct learning from her observation of the stage of development and interests of each child (Cook, 1971, pp. 34-40).

Whenever possible the teacher attempts to read and study widely in many areas, as children unearth interesting topics which require background knowledge and resources. When necessary the

teacher will study certain areas in depth and act as a personal resource for children; at other times, bearing in mind the many themes in which children may involve themselves, the teacher becomes a learner with them. The real challenge for the teacher is to develop a great reservoir of resources, ideas, materials, environments, junk, problems, and inquiries that provide appropriate concrete and interactive links between children and knowledge (Barth, 1972, pp. 65, 69). The knowledge base from which the teacher functions, therefore, emphasizes the importance of an intimate familiarity with children's development and needs in general together with each unique child's evolving life and interests. Armed with this base, she can effectively facilitate learning.

Facilitation of Learning Ideally, the teacher encourages the child to learn things he chooses in ways which are meaningful to him, so that there is a maximum "likelihood that each child will be fully engaged in activity for as much of the day as possible" (Barth, 1972, p. 69). This is based on the premise that engagement indicates that learning is taking place.

The knowledge base, described previously, that the teacher generates, is applied to the problem of providing the individual pupil with appropriate experiences. Interests, needs, development, and skill levels, preferred learning style, aptitudes, and difficulties are all brought to bear on the problem of what the child should do. The effectiveness of this process improves as the child is increasingly involved in decision-making on his own behalf.

The teacher provides a rich material environment to facilitate

concrete interactions for the pupil, adding to it and subtracting from it as needs change. Barth (1972, p. 76 et seq.) has suggested several guidelines for assisting in teachers' selection of material.

1. Whenever possible, encourage and permit children to supply their own materials.

2. Whenever possible, encourage and permit children to explore the real world outside the classroom and outside the school.

3. The best materials for children are common ones, which are inexpensive, familiar, and easily available.

4. Ambiguous, multi-programmed materials which suggest to the child a wide number of possible paths of exploration are preferred.

5. Select materials which have a high likelihood of initiating, sustaining, and extending exploration.

In organizing specific activities with children, the teacher provides the necessary facilitating structure and direction (Hassett & Weisberg, 1972, pp. 32-39). An example to illustrate this might be: following a joint planning session as to the purpose of a field trip, the teacher might provide structure by writing down the activities to be carried out on a wokksheet, which also gives partially prepared data tables for the children to fill out. Children need this type of direction for a new task, but the teacher is also building in increasing independence. For the next venture outside the school perhaps groups of pupils will plan their own trip and worksheet, with the teacher monitoring the procedure. From a management point of view, guidelines and limitations are clearly spelled out, and duties and responsibilities delineated.

The role of the teacher, therefore, is to facilitate jointly with the child the link between him and his environment through

personal activity and comprehension. This is achieved by provisioning and selectively structuring experiences based on intrinsic knowledge of each child's needs and interests.

Interventions While the children work "the teacher moves among them helping, suggesting, questioning, encouraging, observing, commenting, evaluating, comforting and when needed ordering," (Nyquist, 1972, p. 1) as she responds to the child's own experimental trials with the environment (Weber, 1971, p. 101). The teacher's knowledge from previous monitoring together with observations from each present situation enable her to make interventions which are the essence of the teaching act. This is what Blackie (1967, p. 4) meant by the contact between the teacher and child where learning events are diagnosed, difficulties explained and readiness assessed. Interventions may also be utilized to extend experience with challenges, or consolidate experience with words and concepts. These are key acts for the teacher in facilitating learning; Suchman (1966, p. 21) calls them teachable moments.

How the teacher makes interventions is important. As Hawkins (1969, p. 3 et seq.) has written, the teacher has to learn a "natural way of stepping in and out, neither completely in control nor completely withdrawn. This kind of detail cannot be laid out in advance." Apart from learning within the framework of the task at hand, the teacher may encourage much incidental learning. "How many buttons have you painted on your snowman, Rachel?" "Do you know how you would write that word, Tom?" The teacher does not spend much time telling, but listens, observes, questions, responds positively to the pupil and neutrally to his responses avoiding verbal or nonverbal cues. In this way the pupil is able, is

encouraged, and even forced to think. The teacher withholds information until the child has had a fair chance to generate it himself by his inquiry (Suchman, 1966, p. 3 et seq.) The skill of making unobtrusive and unobstructive interventions emerges, therefore, as a chief aid to the extension, diagnosis, and consolidation of individual learning. These require especially healthy interpersonal relationships.

Relationships One of the main conclusions of Pursky's (1971) study of the open classroom is that the key element is relationships. The way in which a teacher responds to pupils in the classroom is felt to be a significant element in the spectrum of factors which influence learning, both in affective and cognitive domains. Open educators emphasize the need for openness, trust, respect, and warmth within interpersonal transactions in the classroom. Teachers in open classrooms display an ability to empathize and to be genuine, balanced by the skill of communicating concretely. The open classroom encourages expression of feeling and emotion and allows the teacher to be a natural human being not playing some professional role stereotype.

Bremer (1972, p. 26) emphasized this as follows:

> Teaching conventions rob teachers of their genuine feeling, deprive them of gratification of their personal desires, inhibit their learning about children, and forbid individuality.

Thus, there is an ease of personal interaction, with a significant amount of physical and psychological closeness between teacher and child.

Planning Though there is a large degree of spontaneity within the relationships and interventions that facilitate learning in the open classroom, it is backed-up and assisted by thorough planning. The headings under which we have discussed the activities of the teacher are not mutually exclusive, therefore the reader may have noted elements of planning elsewhere. The purpose here is to examine planning for learning as it emerges from the teacher's thoughts and facilitates pupil participation.

The open classroom does not emphasize rigidly preplanned content and prespecified outcomes although the teacher probably has a reservoir of skills in mind of which each child should have a good sample during the year. Planning does not focus on coverage of content; this is determined by the pace and scope of pupil activities (Weber, 1972, pp. 101-114).

The teacher maps the terrain of possibilities, improvising on themes provided directly or indirectly by the children. In doing this she is able to anticipate a wide variety of needs. The possibilities opened up and materials provided are usually numerous enough so that even with free choice, pupils tend to be exposed to the basic concepts and skills within the theme (Hassett & Weisberg, 1972, pp. 77-78).

In providing materials for a particular theme, it is the teacher's responsibility to procure materials of a sort that will arouse initial curiosity and interest in the majority of the students. She must provide activity cards, questions, problems and other facilitating structure for activity. It is at this stage of

planning that the teacher is confronted with the fundamental problem: "the educator's task is to maximize the occasion" (Silberman, 1972, p. 75), after making the occasion possible by the environment she creates. It is maximized by the facilitating structure that the teacher provides. The nub of the problem is to plan, structure, and direct without being restricting.

Hassett and Weisberg (1972, p. 34) see several steps in planning. Once the teacher has observed the children and noted what materials they find interesting, she encourages them to develop a rapport with the materials through play, activity, and experimentation. The next step is called brainstorming the materials whereby the teacher becomes aware of their educational possibilities. Suggestions, questions, and supplementary materials are prepared which might help the children in their investigations. Books and other resources to provide background information are gathered.

> The teacher is now ready to take the third step, to introduce the materials to the children and review the routines and responsibilities for using them. A time limit should be set for the initial experience, providing enough time for the children to choose an area, become acquainted with what's available, start to mess about, and go through the routine of cleanup. At least twenty minutes time at the end of the session should be provided for calling together the entire group and evaluating the experience. Many clues to a more staisfactory experience the next time will come from the children themselves. (Hassett & Weisberg, 1972, p. 34).

The above passage illustrates how the teacher sets things up and involves the students in their own learning process, but there are other aspects of planning. A particular group may wish to go

to a museum to follow-up an archaeological theme, another may wish to simulate a dig in the school grounds; the teacher then plans and facilitates, with the groups, for their purposes. The teacher might observe a decline of enthusiasm in another group. Some motivating books, objects or ideas may rekindle interest and restimulate activity or it may be time to end that theme and start another.

Within all of this group activity the teacher must also plan for the individual child from anecdotal jottings, progress charts, and previous observations (Weber, 1971, p. 36). Perhaps John may need to develop his writings, therefore he might be recorder for the next group task. Maybe Sally has painted a lot and might be steered towards reading by utilizing well-illustrated books on art.

The teacher's role in the open classroom, therefore, may be summarized as to facilitate the implementation of the child's own purposes (Weber, 1971, p. 11) within the activities of the classroom as a whole.

Continuity and Wholeness

Having examined the separate roles of pupil, environment and teacher in the open classroom, it is necessary to examine how these coalesce into a dynamic whole. The continuity and wholeness of the open classroom as a unit are as important as the consideration given to individuals within it.

An empirical framework from which to view this concept has been provided by Hassett and Weisberg (1972, p. 11) who state:

> It is evident, then, that the environment acts upon the organism just as the organism acts on the environment. The two are inexorably linked so closely that is is difficult to determine exactly where the organism ends and the environment beings. Just think, you are breathing air in and out at this moment. Your respiratory system is designed to do this. But what would a respiratory system be without air or its equivalent to breathe? The air, as part of our environment is necessary and whether the air is good or bad makes a great deal of difference to our well being. It is equally arresting to imagine a digestive system without something to eat and drink. Though we rarely think of it this way, the food and liquid we eat and drink is part of the environment.

There is a natural continuity between each individual and the environment; furthermore, the environment itself exists in a continuous whole, any fragmentation usually being imposed by man. Within the open classroom this continuity or integration of individual and environment is fostered. The teacher does not interpose as a barrier, but intervenes only to facilitate continuity, by taking account of interest, needs, and curiosity (Barth, 1972, p. 63). The way in which pupils are introduced to new skills and concepts, at their own pace, with due regard to growth and readiness, avoids the fragmentary lock-step system of traditional classroom instruction. The wholeness of the environment is maintained by the curriculum being thematic or project-oriented, to faciliate the purposes of the pupil, rather than being split into subject disciplines. (Weber, 1971, pp. 89-94).

Children move and mix naturally as a social group both within the classroom and outside. Weber (1971, pp. 29, 88), Hassett and

Weisberg (1972, Ch 5) have commented on the "in-outness" of informal classrooms. Children move to and use other parts of the school, the school grounds, the community, and the total environment, maintaining a continuity between the classroom and the real world.

The division between school and non-school is lessened by many practices (Weber, 1971, pp. 31-34; 77-81; 94-100). Children who are encountering school for the first time might be encouraged to come when ready, whether it be September, January or Easter. When they come, it may be for a few visits, half a day, then a whole day, so that the transition is continuous and natural. Some days, when mothers drop their children off at school, they come to the classroom, chat to each other and perhaps with the teacher for a while, as their children begin to engage in activity. Many other activities are begun gradually, so that there is a blurring of any possible source of fragmentation. This attempt to keep things all of apiece, especially as viewed through the uniqueness of the child's purposes, is designed to maximize the possibility that each thing a child does will provide "the next most relevant piece of understanding which dovetails into the pattern already existing in the child's mind" (Wastnedge, 1968, p. 28).

The physical and psychological closeness of a good home, is matched in school, which fosters a rich and cohesive communal life. Morning assembly, cooked lunches at school with pupils, teachers, and some parents interacting together are features of many informal classrooms. A classroom may have children of different ages learning and working together. Children and often parents

participate in the maintenance of daily routines, run errands for the teacher and bring materials from home.

This subsection has described examples of how the activities of the open classroom are integrated into a continuous dynamic whole which minimizes fragmentation and division from many sources. This is achieved by maintaining a sense of community, contact with the real world, and by treating curriculum, knowledge, and learning as a whole rather than a fragmented lock-step system.

Summary

This section has attempted to provide a description of the live open classroom via the roles that the pupil, environment and teacher play in their mutual transactions, together with the way these maintain wholeness and continuity.

It was found that the focus of the open-classroom approach to education is the unique child whose education is facilitated by making him the principal agent in his own learning. Children's main interactions, therefore, are with each other and the environment as they pursue their own interests. This individual approach requires a free environment which permits mobility, social interaction, co-operation and the sharing of ideas. The teacher and children provision the classroom with a rich variety of materials perhaps arranged into different learning areas or projects; the natural environment outside is also available for a child's activities. The teacher facilitates the child's learning by structuring the learning environment to promote and provide interactions which satisify the goals of both her and the child. Her knowledge of each unique child, his background, needs, and learning

style facilitate fruitful interventions within the child's activities to consolidate and extend learning.

The milieu within which learning takes place emphasizes a wholeness and continuity of environment, classroom, school, home, and community.

Metatheoretical Base

The metatheoretical base has been defined as the type of theory and theorizing envisaged for this study. Both of these aspects of the metatheory have been thoroughly addressed throughout Chapters I and II and will not be repeated except to summarize some general descriptors of the type of theory being aimed at in this thesis. It is hoped that the conceptual system developed in this thesis will provide a stepping-stone toward a conceptual theory. Since this system will be induced from the phenomenon (the open classroom) it is supposed to explain, it will be grounded (Glaser & Strauss, 1967) in reality. The main substantive elements of the open classroom are the roles of the pupil, environment, and teacher, therefore the conceptual system will evolve from an interactive framework (Marx, 1963, p. 361) of transactions among those elements. Since the focus of these transactions is the individual child (Hosford, 1973, p. 88) the theoretical base must be idiographic rather than nomothetic (Snow, 1973, pp. 99; Zimiles, 1973).

An important consideration that should be noted is the fact that theorizing in education requires input from several disciplines. Interdisciplinary theorizing has caused problems since one has to

> ...recognize that different disciplines have different cognitive maps and that these maps may well get in the way of successful interdisciplinary inquiry. By cognitive map here, I mean the whole paradigmatic and perceptual apparatus used by a given discipline. (Petrie, 1976, p. 11).

Petrie went on to suggest that for interdisciplinary work one needs to develop common observational categories through which the diverse meanings of different disciplines are interpreted. He suggested the most useful way of overcoming interdisciplinary problems is by the use of models. The procedure for theorizing outlined in this thesis attempts to overcome these problems of interdisciplinary inquiry in the following ways:

1. It provides for a description of the phenomena to be theorized about in terms not peculiar to any one discipline.
2. It provides for the development of a value base for the phenomenon through which all separate discipline bits must interpreted.
3. It attempts to develop a conceptual system and model representing the phenomena which provides a common framework for and coherence to previously disjointed ideas.

Identification of Sensitizing Concepts

The final step of the exploratory phase is to identify concepts which may act as candidates for inclusion in the conceptual system. This section will therefore analyze and compare literature which represents: the historical roots of the open classroom (Category 2),

developmental influences (Category 3), and operational conceptualizations (Category 4). Emerging concepts will be identified and speculation as to relations among them will be made following a critical appraisal.

Historical Roots as Theory

It is not the purpose of this subsection to provide an in-depth analysis of each author deemed to have influenced the roots of the open classroom, for that has been the topic of exhaustive studies elsewhere (Dearden, 1968; Long, 1973: Schoenchen, 1940). It is the intention, here, to scan the literature and identify sensitizing concepts (Griffiths, 1964, p. 104) which are consistent with the preliminary reality base. Special attention is given to the accounts that open educators themselves give as to which writers and concepts provided the intellectual vanguard for the open classroom.

From Dearden (1968), Long (1973), Stephens (1974), Walberg and Thomas (1971), and Weber (1971), all of whom examined to some extent roots of the open classroom, a list of writers of historical importance (Category 2) was derived. The following writers representing the roots of the open classroom were mentioned by more than one of the above authors: Comenius (2), Rousseau (5), Pestalozzi (3), Froebel (4), Tolstoy (2), Montessori (4), and Dewey (4).[1] Their writings, therefore, form the substance of the search for sensitizing concepts in this subsection.

Comenius (1592-1670) the Czech philosopher, placed heavy emphasis on fitting instruction to the child, championing individual

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[1]The number of authors who cite a particular writer

differences in learning with a threat-free enjoyable atmosphere. His recognition of the value of activity and direct experience for learning is evident in the following excerpt from his writings (Keating, 1910, p. 184):

> Everything should,as far as possible, be placed before the senses. Everything visible should be brought before the organ of sight, everything audible before that of hearing. Odours should be placed before the sense of smell, and things that are tastable and tangible before the sense of taste and of touch respectively. If an object can make an impression on several senses at once, it should be brought into contact with several.... Surely, then, the beginning of wisdom should consist, not in the mere learning the names of things, but in the actual perception of the things themselves! It is when the thing has been grasped by the senses that language should fulfil its function of explaining it still further.

Rousseau (1712-1778) viewed humans as essentially good with a natural curiosity. He felt that as a distinct and unique part of humanness, childhood should be valued for itself and recognized as different from adulthood.

> Nature wants children to be children before they are men. If we try to pervert this order, we shall produce precocious fruits that will have neither maturity nor savour and will not be long in spoiling; we shall have young scholars and old children. Childhood has its way of seeing, thinking, and feeling that are appropriate to it; nothing is less intelligent than to want to substitute our own ways (Rousseau, 1908, p. 72).

Rousseau advocated, therefore,that instruction should proceed idiosyncractically, being based on the instinct of the child and his

expanding interests. Rousseau, more than Comenius, acknowledged that experience gained through activity is the chief means of education as opposed to verbal teaching. He emphasized the training and expanding of the senses via concrete interactions with the wide resources that nature provides. He observed that the child does not discriminate between work and play in learning; furthermore, the child sees learning as all of apiece not separated into distinct disciplines (Schoenchen, 1940, p. 7). Rousseau's importance as an antecedent of activist, informal, and open classrooms is also supported by Long (1973, pp. 38, 55); Stephens (1974, p. 2); and Walberg and Thomas (1971, p. 89).

Although Comenius and Rousseau anticipated him in many respects, Pestalozzi (1746-1827), the Swiss educator, operationalized many of their notions within an activist style school. He felt that one's free,observant, and inquisitive ability to study is repressed and lost by verbal learning. He saw activity as an expression of an innate and universal drive to comprehend. He advocated concrete manipulation prior to abstract ideas, since he believed the child's sensory experience is the foundation of knowledge (Schoenchen, 1940, pp. 12-15).

In Pestalozzi's own words:

> Teach him absolutely nothing by words that you can teach him by the things themselves; let him see for himself, hear, find out, fall, pick himself up, make mistakes; no work, in short, when action is possible. What he can do himself, let him do; let him be always occupied, always active, and let the time you leave him to himself represent by far the greatest part of his childhood. You

> will see that Nature teaches him better than men (Pestalozzi in De Guimps, 1892, p. 46).

The words of Pestalozzi support activity and experience but furthermore they also advocate the development of self and independence. He emphasized this further by urging the teacher to value the pupil's liberty without imposing too much of what the child can find out for himself. Whereas he requests that the teacher leave the pupil to experience the consequences of his own liberty without shielding him; at the same time Pestalozzi advises the teacher to rescue the pupil, show him the right way, give advice and counsel (Pestalozzi in De Guimps, 1892, pp. 46-68).

Froebel (1792-1852), a German educator, saw education as the unfolding of the child's inner nature through contacts with external objects and materials, which would establish an inner connection between inner and outer worlds. To permit this to happen it is necessary to recognize the individual as a unique person in childhood with a need to follow innate interests (Froebel, 1886, p. 4; Schoenchen, 1940, pp. 17-18).

Froebel's major role was in his re-affirmation of the value of play.

> Play is the purest, most spiritual activity of man at this stage (childhood) and, at the same time, typical of human life as a whole - of the inner hidden natural life in man and all things. It gives, therefore, joy, freedom, contentment, inner and outer rest, peace with the world. It holds the sources of all that is good. A child that plays thoroughly, with self-active determination, perseveringly until

> physical fatigue forbids, will surely be a thorough, determined man, capable of self-sacrifice for the promotion of the welfare of himself and others (Froebel, 1886, p. 78).

Froebel thought that the purpose of instruction was to "bring even more out of man rather than to put more into him" (Froebel, 1886, p. 279). He claimed that through self activity, sense training takes place. The child should hear, feel, weigh, taste, play with and manipulate.

> Knowledge gained as a result will be valid and will affect thinking, judgement, and the ethical and aesthetic factors in the mind. From this point of view, self activity, or doing leads to feeling and knowing, and is therefore the dynamic factor in education (Long, 1973, p. 62).

Finally, there are two lesser known but important aspects of Froebel's thinking. Firstly, he noted that the student should have freedom to make choices from a variety of possibilities in order to operationalize his interests and self activity. Secondly, he asserted that the development of the child at his present level is conditioned by his development at previous levels (Schoenchen, 1940, p. 18).

Tolstoy, in the eighteen fifties, established a school for peasant children on his estates. His aim was to develop individuals who could assess and change society. Tolstoy thought that education should help nurture "the free and individual human spirit which has its own sense of direction" (Tolstoy, 1967, p. ix).

As an approach to instruction, Tolstoy first attempted to fathom the mind of the peasant child. He experimented with

different methods for different individuals, believing that the pupils would find their own ways of learning. He utilized children's needs and interests as a starting point, entrusting to children the responsibility for choice of topic and modification of plans. He gave serious attention to respect for pupil's feelings and insisted that school should and could be a happy place. He avoided punishment, feeling that children could best work out their own conflicts without adult interference (Tolstoy, 1967, pp. 58-61).

Another educational movement like that of Pestalozzi and Froebel, which resulted in schools modelled after its beliefs, was that which followed Montessori (1870-1952). Schools which adhere to her philosophy still flourish in North America. Her schools are based on firstly, a respect for the child's individuality, and secondly, encouragement of personal freedom (Montessori, 1912, pp. 14-16). These two principles determine not only the atmosphere of the school, but the tone of relationships, the arrangement of the classroom, and the nature of instruction.

Since Montessori believed there is a close relationship between the senses and the intellect, her methodology emphasizes sense education. She encouraged freedom but claimed that since this also means independence which needs to be guided initially, children's interactions with materials should be structured. She accomplished this by careful selection and construction of materials and exercises which the children fcllow (Montessori, 1912, Ch 16). This is still thought of as sense education since the child does the sensing, not the teacher (Montessori, 1912, p. 173).

The final author of historical importance to the open classroom in this review is Dewey, who, as leader of the progressive education movement, has had significant impact on the initial and later manifestations of the informal or open classroom (Weber, 1971, p. 170). Dewey believed, as did Rousseau, that education should be compatible with the natural growth of the child. He thought that the child would learn and develop well if exposed to experiences provided by appropriate environments. Since Dewey saw personal experience as the prime source of education, he was opposed to its distortion by the adult values, interests, and abstractions inherent in an overly directive teacher role (Dewey, 1963, p. 55). Since all experience is not educative, Dewey developed criteria for quality experience which would be educative. This gave rise to the concepts of continuity and wholeness of experience for the purpose of learning; which imply that curriculum should be maintained as an integrated continuous whole. This type of experience reflects the real world rather than being fragmented into separate disciplines and time of study (Dewey, 1963, Ch 3). Dewey thought that children should have the freedom of movement and social interaction in the classroom, as this, together with activity and experience, leads to independent judgement. He did caution, however, that the appropriate amount of freedom of activity varies according to the individual and age (Dewey, 1963, pp. 62-63).

Despite an emphasis of socialization for democracy, Dewey (1916) still recognized the individuality of the child and showed concern that he be able to make choices, evaluate consequences, and otherwise participate in his own education.

> There is, I think, no point in the philosophy of progressive education which is sounder, than its emphasis upon the importance of the participation of the learner in the formation of the purposes which direct his activities in the learning process (Dewey, 1963, p. 67).

To summarize, Dewey felt that to learn, a child must obtain experience. The value of a particular experience for learning may be judged by two criteria: interaction and continuity (Dewey, 1963, Ch 3). The more the child actively interacts with objects and others, the better the experience; also, the more continuous and whole a sequence of activities is, the better the experience. This results in learning, that is, the building and modifying of meaning, internal structures, and the way the external world is viewed. Dewey felt (1963, p. 44) that a fully integrated personality exists only where successive experiences are integrated with one another. He noted that the educator's responsibility is to consider in what direction an experience is heading, and to judge its educational significance by utilizing the criteria of interaction and continuity (1963, p. 40).

Emerging Concepts The foregoing educators contributed to approaches which later were to find a place in the open classroom. The general contribution of most writers discussed was towards the themes of individualism and activity which find a strong presence in the open classroom (Long, 1973, Chs 7 and 9). Besides these general themes, the open-classroom approach gathered specific contributions from each author in a typically ecclectic manner (Weber, 1971, pp. 170-171).

From Comenius, informal educators particularly culled the need for concrete experiences; Rousseau directed their attention to the usefulness of childhood, the uniqueness of each child and thus the necessity for an idiosyncratic education based on the child's instinctive activity and interests. Pestalozzi, it could be said, re-affirmed concreteness, but also introduced explicitly the idea of freedom and independence for children. Blitz (1973, p. 4) succinctly summarizes other thinkers' contributions to the open classroom. She attributes to Froebel the acceptance of play as a useful way of learning; to Montessori the importance placed on materials and surroundings for providing structure for learning; and to Dewey the need for real experiences, the wholeness of life, curriculum, and the child's learning.

Figure 7 illustrates these concepts and tentative relationships that may exist between them. The conceptual network represented by this figure is organized on the basis of confluent roles for the child, the environment and the teacher in determining and implementing learning activities for the unique child. The main determinants of these activities are the characteristics of the individual child, his needs and interests. The source of activities is the concrete materials of the real world. The teacher's role is a facilitator of the child's learning through activity and play; she maintains the value of the experience which results by making the curriculum whole, continuous, and integrated.

There are some concepts within the historical vanguard of the open classroom which do not emerge with a major emphasis but

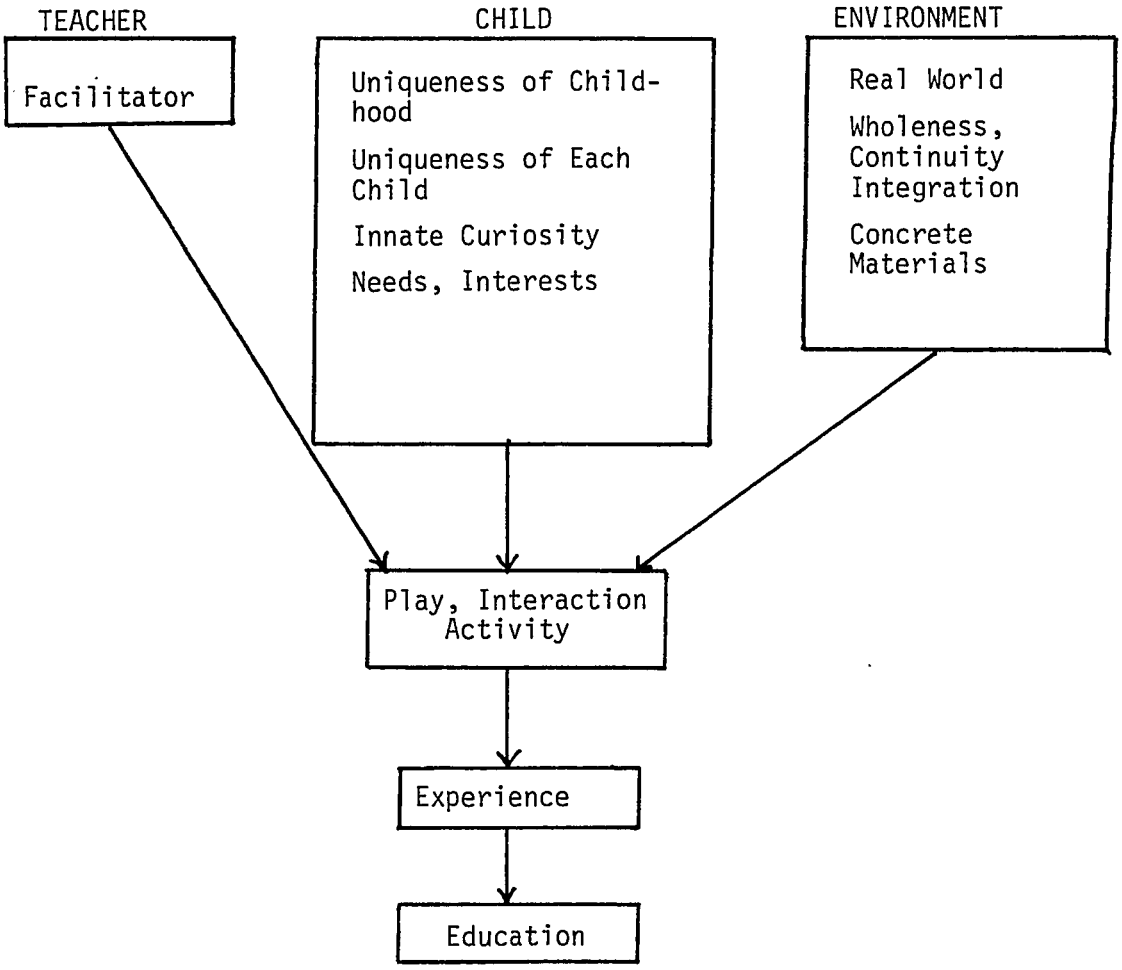

Figure 7: Diagram illustrating concepts and relationships which emerge from the historical roots of the open classroom.

foreshadow future development. Froebel did state that the development of a child at a particular stage was dependent on development at previous stages (Schoenchen, 1940, p. 18). Glimmers of the notions of choice, participation, actualization, social interaction, enjoyment, and relationships were mentioned but not given specific emphasis. The role of the teacher as facilitator of learning is implicit but no really detailed and practical description of what the teacher does was evident.

Influences on the Development of the Open Classroom

The previous subsection described the intellectual vanguard of the openclassroom, identifying major concepts which became part of classroom practice. As the open classroom has been evolved over the past thirty or more years, other writers, mainly functioning within educational psychology, have influenced the further development of earlier ideas and the provision of a more coherent rationale for the open classroom. The purpose of this subsection, therefore, is to identify major influences on the development of the open classroom. As with the previous subsection, it is not the intention here to provide an in-depth analysis of all of the writings of each author, but to scan the literature to identify sensitizing concepts which are consistent with the preliminary reality base, and which are claimed by proponents of the open classroom to have influenced its development.

From Barth (1972); Blitz (1973); Dearden (1968); Hassett and Weisberg (1972); Long (1973); Silberman (1972); and Weber (1971), all of whom examined, to some extent, major influences on the

development of the open classroom, a list of writers (Category 3) who had a major impact on the evolving open classroom was prepared. The following writers were mentioned by the majority of the above authors: Piaget (7), Bruner (4), Maslow (4), and Rogers (4).[1] These writers are representative of developmental, humanistic, and, to a limited extent, existential psychology. Other writers will be cited where justified by context and when they aid in the identification of sensitizing concepts and tentative relationships among them. The subsection will be concluded with a discussion of how the theoretical base implicit in the historical antecedents of the open classroom evolved under the influence of Category 3 writers. Emerging concepts and tentative relationships will again be identified.

Developmental psychologists initially examined the concept of maturation which consists of "organic processes or structural changes occurring within an individual's body, that are relatively independent of external environmental conditions" (Mussen, 1963, p. 14). The changes which occur as a result of the combination of both maturation and learning are called development. From an early emphasis on physical development attention has moved to other specific forms such as cognitive, social, emotional, moral, and language development. A psychologist whose work in this field has been particularly appropriated to support and develop practice for the open classroom is Piaget, the Swiss psychologist. His research with children has provided valuable insights for theories of moral, language and intellectual development (Weber, 1971, pp. 171-173, 185).

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[1]The number of authors who cite a particular writer.

His theory of intellectual development rests on the notion that intelligence in animals stems from two sources: the ability to mentally organize experiences into integrated coherent systems, and the ability to adapt via interaction and adjustment. He also feels that children have an innate tendency to interact with their environment, and that this interaction fosters an increasingly complex mental organization (Piaget, 1964). Adaptation, within cognitive structures, is seen by him as taking place in two ways. Firstly, the process whereby additional sensory input fits easily into existing structures (schemata) in the brain is called assimilation. Secondly, when the child encounters new experiences which cannot fit existing structures, accommodation takes place during which structures are modified in some way. In this sense, the process of learning must be individual, in substance, style, and pace.

Piaget has shown that children proceed through stages of intellectual development from birth through adolescence. There are indications that when certain experiences are lacking during the child's life, the development of formal thought may be hindered (Berelyne, 1964, pp. 311-323), so that some children never reach that stage. Piaget's ideas on intellectual growth in children (Inhelder & Piaget, 1958, Flavell, 1963) included four stages. These are: sensory-motor, pre-operational, concrete, and formal operations. Within the sensory-motor stage the child learns to control gross body movements and utilizes his senses to deal with external objects and events. The beginning of language is occurring by the end of this period which extends from birth to approximately

two years. The pre-operational stage (approximately 2-7 years) is the greatest period of language development when a child acquires an understanding of words and concepts. He still is not capable of logical thought and his mental activity is directly related to what he has or can experience physically. During concrete operations, however, the child can internalize actions so that he can perform mentally what previously had to be done through physical actions but his mental activity is still limited to what he has experienced via his own actions. Only when the child has reached formal operations can he think beyond and in the absence of personal experience to develop abstract thought.

Piaget's empirical-based theory of intellectual development provides support for learning by doing; the child's own activity fostering development (Flavell, 1963, p. 115). The notion of sense training via interaction with and manipulation of concrete objects is made more evident by Piaget's work, including the usefulness of play (Piaget, 1932, Ch 1); but it may also be interpreted to support structured interactions with materials and verbalization thereof, to provide for the development of logical and abstract thought. As well as it being clear that assimilation and accommodation are individual, the usefulness of peer social interaction in aiding intellectual, linguistic, social and other forms of development is implicit.

Bruner (1966, p. 6 et. seq.) has developed ideas which parallel those of Piaget. He particularly examines the growth of symbolic representation. He suggests that intellectual development proceeds

through three progressive types of representation. The first type he calls enactive representation because the young child defines events and objects in terms of the actions he takes towards them. At approximately the age of three iconic representation appears. Thought emerging from this system of representation depends on direct experience of the senses from highly concrete actions. As the child's intellectual state develops he is able to use the most advanced from of representation which is called symbolic. At this point the child is able to have mental images and thoughts which have an autonomous status, that is, they may exist in the absence of immediate concrete experience. The vehicle for the development of this process is language. Experiences are translated into language which is then used as an instrument of thinking. These modes of thought parallel the sensory-motor, concrete, and formal stages of Piaget, and Bruner (1966, p. 49) affirms that experience is of fundamental importance to build a store of concrete images containing multiple embodiments of the same idea (Bruner, 1966, p. 65) to exemplify and facilitate later abstractions. Implicit within these notions is that sufficient experience must be gained from a rich and concrete environment which has continuity; symbolism cannot be rushed. He also emphasized the individuality of learning style so that there cannot be one sequence of content for all learners (Bruner, 1966, pp. 49, 71).

While the essential role of activity and experience in terms of intellectual development has been made evident, there is strong evidence that the same is true of moral development. Piaget (1932,

Ch 1) traced three stages of moral development through the game of marbles, from early imitative physical movement, to rule conformity without understanding, to autonomy. Peck and Havighurst (1960) and Kohlberg (1966, pp. 1-30) discerned similar phenomena of egoism, conformity, and internalization.

There are other developmentalists whose work is contributing to a growing theoretical body of knowledge that undergirds the practices of the open classroom. The search for concepts pertinent to the open classroom conducted here, however, has been limited to those writers who are consistently claimed as influential in the development of the openclassroom.

Having seen how the earlier concepts of the nature of the child and growth have been made explicit by Piaget and Bruner, and how both innate templates for maturation and environmental experiences influence development, the next logical step would be to examine the concept of needs. The most influential writer in this area for the open classroom has been Maslow. He wrote that "psychology is not purely descriptive or academic; it suggests actions and implies consequences" (Maslow, 1968, p. iv). This assists further in the transition, in this thesis, from historical theory which is mainly descriptive, to a more prescriptive theoretical base for the open classroom.

Maslow proposed a theory of need gratification, the basic principle of which is "the tendency for a new and higher need to emerge as the lower need fulfills itself by being sufficiently gratified" (Maslow, 1968, p. 55). He suggested a hierarchy which

is divided into deficit and growth needs. The deficit needs in ascending order are physiological needs, safety, belongingness and love, and finally esteem. These are followed by the growth needs of self-actualization, the desire to know and understand, culminating in aesthetic needs. Lack of fulfillment of deficit needs provides a fearful negative motivation to satisfy them. When a person has sufficiently met deficit needs, he then is able and motivated to move towards fulfillment of growth needs, not through fear, but natural positive impulses. Maslow (1968, pp. 15-16) also urged that humans should strive for authenticity. He asserts, however, that given the freedom, most adults do not know how to do it. He claimed that some people are good choosers, others are bad, so that education should provide for learning how to make good choices.

The following points summarize the very basic implications of Maslow's work for education:

1. Lower level needs of students should be satisfied so that they are not hungry; they are physically comfortable, relaxed, feel safe, have a sense of belonging, and experience self esteem.
2. Personal growth is thought to be the resultant of two opposing forces - the fear arising from deficit needs and the natural drive towards self-actualization. To maximize growth, therefore, the learning environment should be as non-threatening as is possible.
3. Education should provide flexibility for children

> to make their own choices, but, at the same time, it should develop the skills of making good choices.

Maslow (1968, pp. 9-10) foresaw, as man developed, the collapse of all values outside the individual; existential psychologists emphasize this phenomenon even more (May, 1953, pp. 22, 48-49). They say that man in becoming more human and less animal, has gradually had to shift the locus of values from society to the individual. Many people, however, still wish to be outer-directed because they cannot choose and decide for themselves on the basis of their own value system. Frankl (1963, p. 167) calls this the "existential vacuum." Toffler (1970) has documented rate of change of external society and the emerging transient nature of individuals. Within this increasing mélange of temporariness, human beings must locate some sense of permanence and stability within themselves via their own value systems which will author their lives; otherwise the cacophony of stimuli and sensations which impinge from the environment will make them servo-mechanisms. May's (1953, p. 49) comments, therefore, are underlined: Humans do need to develop an inner locus of values by which they can choose, decide, and live in autonomy, independence and enlightened interdependence. The educational system has a tremendous responsibility to develop the abilities to make choices and decisions. As Maslow urged (1968, pp. 9-16) children need to learn to choose their own values so that they can take responsibility for themselves and their own lives.

Krishnamurti (1953, pp. 10-27), in discussing the same problems of the development of a personal locus of values asserted that the teacher "should help each individual student to observe and understand his own self-projected values and impositions; help him become aware of the conditioning influences around him" (Krishnamurti, 1953, p. 27) since all of these plus his own desires limit the mind and breed fear.

Belanger (in Herbert & Ausubel, 1969, p. 99), when discussing the psychology of openness, dubbed education which emphasizes books as the agent of learning, 'Mode 1'; people as agents of others' learning, he called 'Mode 2', and self as the prime agent in learning, 'Mode 3'. In developing the classroom which satisifies conditions implicit in the work of psychologists who advocate openness, he affirmed the need for 'Mode 3' style learning. Similarly, "the curriculum is not there to be mastered (as the traditionalist would say), nor it is there to be experienced (as the experimentalist would say). It is there to be chosen." This quote from Long (1973, p. 24) while making a point, is rather absolute in tone and ignores the established value of experience. It could complement the conceptual base delineated so far if stated in terms of priorities and aims. With the child as the main agent in his own learning, the open educator would state it thus: curriculum should firstly, be chosen, secondly, experienced and thirdly, understood.

Rogers (1969), who is considered to have influenced the development of the open classroom particularly in North America, emphasizes the existential notion of self. He is representative of

the many existential psychologists who could be interpreted as supporting the open classroom, but he remains, thus far, the only recognized as such. One recognizes here the strong link with Weber's (1971, p. 11) notion that the core concern of the open classroom is the implementation of the child's own purposes or self. Rogers (1969, p. 5) stated that only experiences that involve the pupil's genuine self result in any learning of significance. Learning which is of importance can only be self-discovered and self-appropriated; it cannot be directly communicated (Rogers, 1969, p. 151). Rogers suggested (1969, p. 157) principles for learning which emphasize the self, personal relevance, interest, involvement, activity and feelings as well as the intellect. The teacher (Rogers, 1969, p. 52) maintains the pupil's own interests by providing the facilities for students to express and realize their own goals within a climate of trust, open communication, and mutual respect.

Emerging Concepts The writers included in this subsection generally support the concepts which emerged from the intellectual vanguard of the open classroom. The unique nature of childhood is detailed by the stages of intellectual, language, and moral development as is the uniqueness of each child within these general patterns. These writers also concur with the notion of innate curiosity which motivates activity within each stage, although the concept of needs as motivation is emphasized only by the work of Maslow (1968). The role of self and choice, which occurred only slightly within the roots of the open classroom, emerges strongly via Maslow's (1967) notion of self-actualization. Rogers (1969), as a representative of

the existential view which supports the open classroom,emphasizes self, choice, decisions, and personal values even more; this being consistent with Weber's (1971, p. 11) notion of implementing the child's own purposes. What the child is interested in doing as a source of significant learning is affirmed also by Rogers (1969).

From this subsection, it is summarized that within the open classroom the child becomes the main agent for his own learning, as far as he is presently able, with facilitating support for actions which are significantly beyond his present capabilities. The use of activity within a rich manipulative environment with concrete materials is heavily supported by Piaget (Flavell, 1964, p. 115) and Bruner (1966) who also re-affirms the benefit of play. This activity provides the necessary personal experience for significant learning. Maslow (1968) and Rogers (1969) to some extent examine the role of the teacher as facilitator of activity within a climate of trust, open communication, and genuineness.

The concepts that have emerged thus far in this chapter may have given rise to some misconceptions in the past and it is necessary to clarify their meaning to avoid misinterpretation. As Bussis and Chittenden (1970, p. 15) have said the open classroom is neither student-centered nor teacher-centered but both. Therefore, as tempting as it may be to suggest that the curriculum of the open classroom is based solely on the needs of the child, it is erroneous. The teacher and child jointly determine what is to be done, with the teacher remaining inescapably responsible for administering the child's education (Dearden, 1962, p. 13). Also

progressing from psychological facts (needs) to what might have to be done to satisfy them involves value judgements on the part of both educator (Dearden, 1962, pp. 14-16) and pupil. What is probably true is that educators base what they decide the child shall do on the nature of the child, taking into account what both the teacher and child might value. A needs-based education, therefore, does not free the educator from responsibility. Furthermore, in actuality what emerges via values is not needs-based (psychological facts) but interest-based (value laden) curriculum.

Another contributing factor to the motivational fallacy is the confusion of needs with the wants or desires of the child. Because a child wants something does not mean he needs it. So the notion of needs is more correctly used with physiological development and innate characteristics in mind rather than the transient desire of the child. To say a child needs to play with manipulating blocks is more than to say he wants to (Dearden, 1968, p. 17).

Since open classroom purports to faciliate the child's unique purposes (Weber, 1971, p. 11) its curriculum is ultimately interest based. There is no reason why an interest-based education cannot include activities to satisfy basic needs as determined by educators. But again, the nature of interests has to be considered (Dearden, 1968, p. 17). A child could be interested in pornography, crime, poking animals with sticks (p. 20) and pushing other children off their bicycles, but are these desirable? What is therefore meant by an interest-based education is one which takes advantage

of expressed pupil interests in ways which the teacher deems acceptable. The teacher also has a responsibility to stimulate pupil interests in areas which will be of benefit to the pupil as judged by the teacher.

The question still remains, however, as to which new interests the teacher is to stimulate and on what basis, as well as which basic skills are to be harnessed to existing interests (Dearden, 1968, p. 24). Useful answers to these questions are dependent on values. Dearden (1968, p. 38) extrapolates from Dewey to state that "nothing is of value to us unless it can enter our experience in such a way which enables us to realize what is valuable in it." The best experiences according to Dewey (1963, Ch 3) as mentioned in the previous subsection are ones which maximize continuity and interaction.

It is apparent, therefore, whichever way one examines the open classroom that the curriculum is ultimately based on the joint values of teacher and child. Equilibrium is maintained by utilizing means which capitalize on the child's interests but at the same time are congruent with the teacher's representation of society's objectives.

Figure 8 represents an updated diagram of potential concepts and relationships for a conceptual system representing the open classroom in light of the contributions of Category 3 writers. The basic structure of the network remains as a confluence of three roles but with certain aspects becoming more explicit. Within the child's contribution, the notion of child development as a broad determinant and result of learning and activity has been

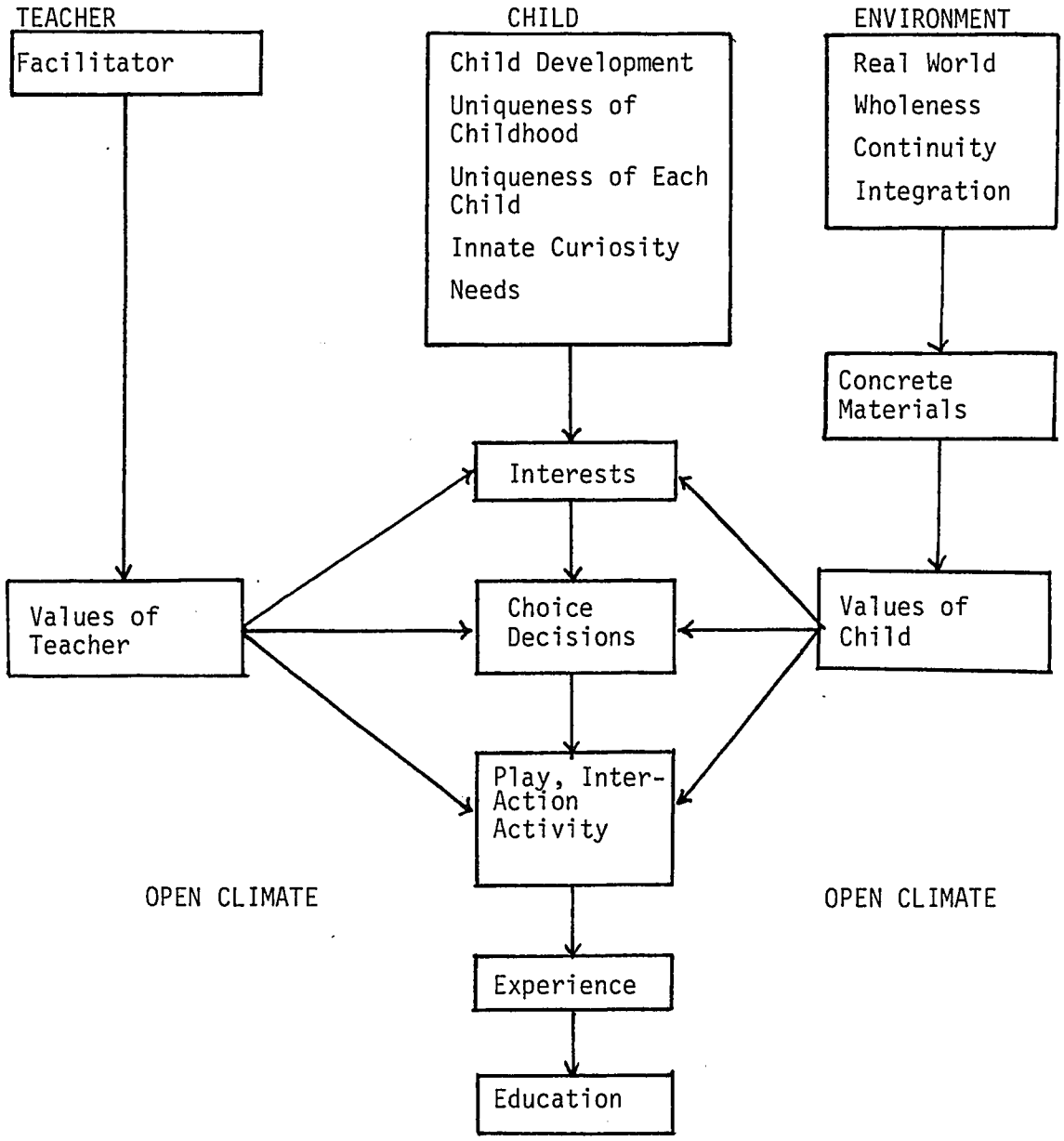

Figure 8: A diagram illustrating concepts and relationships which emerge from the historical roots and developmental influences of the open classroom.

explicated. For the unique learner and teacher, the value of interest as an operational focus for the determination of activity has been illustrated. Furthermore, interest has been demonstrated to be value-laden. The developmental influences on the open classroom made explicit the part played by choice in the events of the open classroom. Although, ideally, the individual learner makes the final selection, the joint contributions of the values of the teacher and child toward confluent objectives have been demonstrated.

Operational Frameworks for the Open Classroom

This section represents efforts to generalize the multiple transactions of the open classroom into simple operational frameworks which can be used to view reality.

The literature included is as follows: Barth (1972), Bussis and Chittenden (1970), Butt and Wideen (1974), Tuckman (1974), and Traub et al (1972).

The following abstractions fall into several groups; those which view the open classroom through the interaction of pupil, environment, and teacher; those which emphasize operational themes; those which have emanated from empirical efforts to describe and measure openness; and lastly those which are the result of particular case studies. The categories overlap and interact. These efforts at providing operational frameworks cover a wide spectrum, and have significant differences which depend on both the viewpoints of their proponents and the purpose for which they were developed, whether to explain, describe, prescribe, or measure. Nevertheless, they

represent a first level of generalization toward theory and therefore are useful sources of concepts for the conceptual system.

Besides presenting these abstractions and their differences, an attempt will be made to demonstrate the relationships which exist between them.

An Interactive Framework Barth (1972, pp. 63-66) utilized an interaction model to explain how the open classroom differs in transactions from traditional learning. He viewed traditional learning as based on a transmission of knowledge model: from the totality of man's knowledge (K), various portions of substantive content in certain discipline areas are selected to constitute the curriculum (C) of the school system. This task is undertaken by experts within a highly centralized school system. In turn, this knowledge in the curriculum is transmitted by an agent (A) of the school system to the child (S). The students are usually evaluated on how much of a given portion of K they can demonstrate they have acquired at a given time. This traditional model is illustrated in Figure 9.

According to Barth (1972, p. 63), the open classroom does not accept the limited transactions of the "transmission of knowledge model" or the premises on which it is based. It is completely different in its approach to learning. It emphasizes the child. The Open Classroom Model is illustrated in Figure 9.

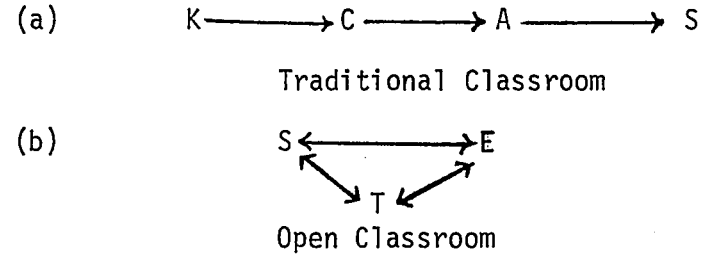

Figure 9: Diagram illustrating differing interaction patterns in traditional and open classrooms (Adapted from Barth, 1972, p. 63).

The child(S), through interactions with the environment(E) of materials, equipment, and his peers, provides his own main access to knowledge and ways of knowing. Standing by, however, is the teacher (T) who has provided the initial stimulating environment, prior to the main activity, and who also will make unobstrusive interventions to extend, sustain, and remediate learning. As Barth (1972, p. 63) has written "The teacher's place in this model is somewhere outside the learning process."

Another important difference between the open and traditional classroom that Barth (1970) has highlighted is the view of knowledge. Traditional models emphasize the discrete discipline approach in which experts have identified an objective body of knowledge, whereas in the open classroom, knowledge is regarded as a personal accretion and a search for personal meaning. This parallels Dewey's (1963, Ch 3) notions of experience, continuity, and wholeness.

A simple but useful way of looking at the open classroom in context with other types of education has been provided by Bussis and Chittenden (1970, p. 15). Their two-dimensional classification scheme utilizes the relative contributions of pupil and teacher to classroom transactions (See Figure 10).

This framework is useful in that it dispells the myths that firstly the teacher has a minimal function in the open classroom, and secondly that the classroom is only child-centered. Bussis and Chittenden point out the artificiality of the child-centered versus teacher-centered dilemma by conceiving them as two dimensions of the same source phenomenon. The open classroom has high contributions from both. This subsection has described an inter-

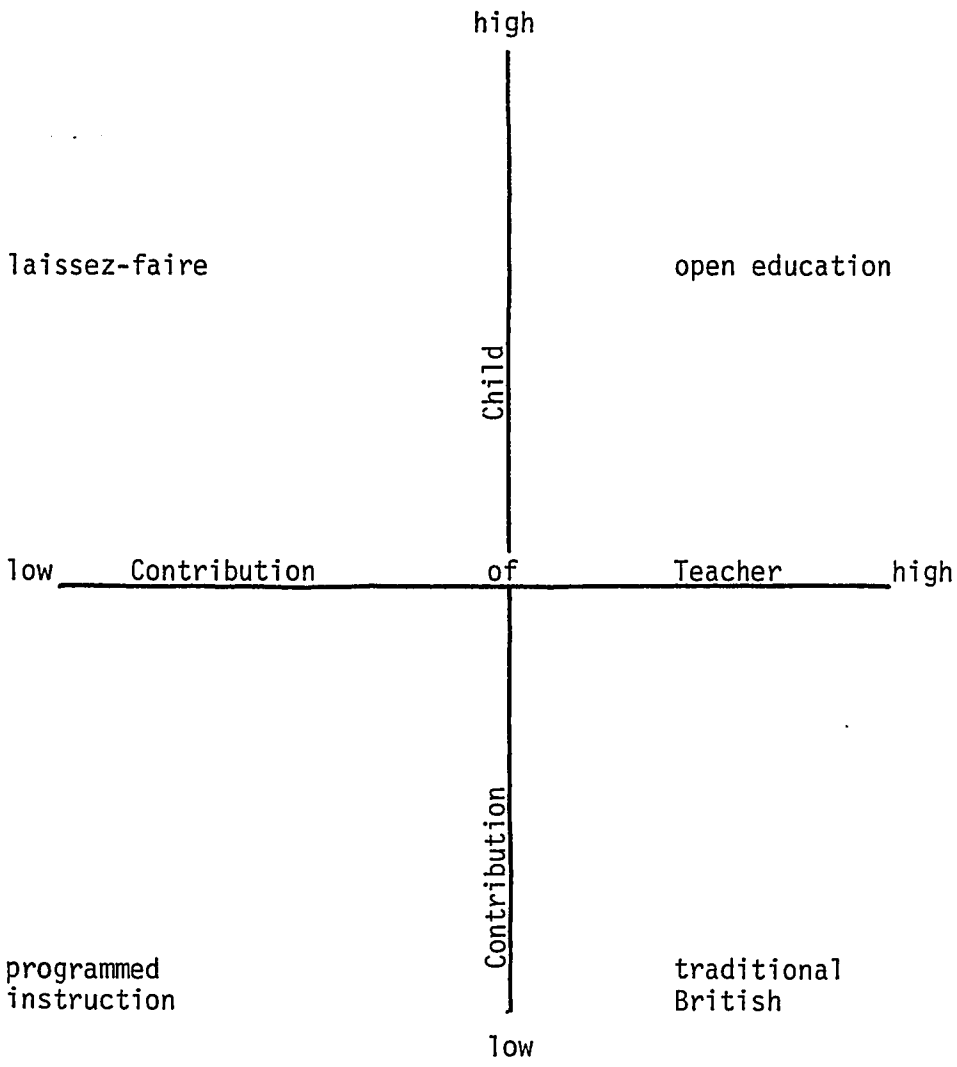

Figure 10: Double classification scheme based on Extent to which (1) the Individual Teacher and (2) the Individual Child is an Active Contributor to Decisions Regarding the Content and Process of Learning (from Bussis and Chittenden, 1970, p. 15).

active framework for representing the contributions and roles of the pupil, environment and teacher in the open classroom.

Operational Themes A more detailed explication of the open classroom viewed specifically through the role of the teacher is provided by an examination of operational themes. Bussis and Chittenden (1970, pp. 29-30) observed "because we found it difficult to define the teacher's part in an open setting - to explain how a classroom contains both an active, influential adult and active, influential children - considerable time was spent in trying to examine the teacher's role..." Themes which emerged from in-depth interviews concerning the teacher interaction with children included (a) diagnosis of learning events (b) the guidance and extension of learning (c) honesty of encounters (d) respect for persons and (e) warmth. Teacher behaviour occurring outside the context of interaction with children included three themes (f) provisioning for learning (g) reflective evaluation of diagnostic information and (h) seeking activity to promote continuing personal growth. Themes not relating to behaviour but relating to internal belief systems of the teacher consisted of (i) ideas related to children and the process of learning and (j) ideas related to perception and self. These ten themes were later modified to eight by Walberg and Thomas (1971, pp. 12-15) who claimed that the Bussis and Chittenden (1970) themes (f), (g), and (h), actually occurred enough within the context of interaction with children to warrant their use on an observational scale. A similar observation was made about the theme of reflective evaluation. They also argued that seeking personal growth takes

place most all within the classroom as the teacher learns with and because of the children. Walberg and Thomas (1971, p. 19) also combine Bussis' honesty, respect and warmth into their one theme of humaneness and rename the themes concerning the teacher's internal frame of reference. Their eight themes are summarized as follows (Walberg & Thomas, 1971, pp. 16-22):

1. Provisioning for learning. The teacher provides a rich and responsive physical and emotional environment.
2. Diagnosis of learning events. The teacher views the work children do in school as opportunities for her to assess what the children are learning, as much as opportunities for children to learn.
3. Instruction-guidance and extension of learning. The teacher acts primarily as a resource person who, in a variety of ways, encourages and influences the direction and growth of learning.
4. Humaneness - respect, openness and warmth. The teacher promotes an atmosphere of warmth, openness, and respect.
5. Reflective evaluation of diagnostic information. The teacher subjects her diagnostic observations to reflective evaluation in order to structure the learning environment adequately.
6. Seeking opportunity to promote growth. The teacher seeks activities outside the classroom to promote personal and professional growth.
7. Assumptions - ideas about children and the process of learning. The teacher's assumptions about children, the process of learning, and the goals of education are generally humanistic and holistic. Teachers are aware of and respect the child's individuality and his capacity to direct his own learning.

8. Self Perception. The teacher is a secure person and a continuing learner.

Walberg and Thomas (1971, pp. 60-71) went on to develop an observational instrument from these themes which will be discussed in the next section.

Tuckman (et al, 1974), in designing a study to investigate relationships between aspects of the open classroom and student outcomes, proposed six themes. These include Flexible Use of Space, Student Activity, Grouping Student Centredness, Creative Dynamism and Organization, and Warmth and Acceptance. These reflect more of a focus on the child's role than the themes of Walberg and Thomas (1971, pp. 16-22).

Empirical Approaches Whereas the previous section was concernd with themes derived or hypothesized from naturalistic observations, this subsection examines operational concepts which emerge from the factor analysis of data collected using observational instruments which were designed specifically for measuring, describing, or evaluating openness. Therefore, these concepts, within the limitations of the spectrum of items utilized for the instruments and the emphasis and bias inherent in them,reflect empirical reality.

Traub, Weiss, Fisher and Musella (1972) developed an instrument for rating the openness of school programs called Dimensions of Schooling (DISC) which is based on teacher responses as to how learning is organized. Factor analysis of data collected utilizing DISC yielded six factors, namely:

1. Individualization includes items concerned with student choice of method, materials, and pace as well as interest, individualized objectives, a teacher role of resource person and small groups.

2. Student Independence emphasizes flexible and unstructured time, independent study, and an active student role in planning and evaluating.

3. Environmental Flexibility contains items concerning field work, community learning resources, a varied and rich classroom environment, and media.

4. Non-gradedness taps the degree to which students were free from a lock-step grade-system, the ability to proceed at the student's own pace and similar notions.

5. Flexibility of Student Evaluation reflects the variety of evaluative techniques including non traditional anecdotal records and progress charts.

6. Flexibility of Curricular Materials assesses the richness of the materials, environment, concludes the set of factors.

Butt and Wideen (1974) developed a thirty-nine item scale based on interactions among pupil, environment, and teacher which purports to measure degree of openness within elementary science classrooms. A factor analysis of data gathered utilizing this instrument provided eight factors which, while attesting to the validity of the theoretical constructs of science education, reflected general classroom transactions rather than any which seemed unique to science education.

The strongest factor, Student-Interactive Dynamism, reflects grouping, mobility, and interaction of students among themselves within a good psychological and physical environment. This factor is mirror-imaged by Authoritarian Non-Interactive Anomie within which the teacher does not ask divergent questions, give students time to think and ponder, or encourage students to examine how something was learned. Predictably, the teacher is not approachable or enthusiastic; she arouses neither curiosity nor interest, thus the pupils are not enthusiastic or responsive.

A factor involving pupils making decisions and choices, proposing alternate ideas, asking questions is named Student Authenticity. Another factor, Teacher/Subject Centredness, involving the teacher showing and telling, providing answers throughout the activity and so on, mirrors Student Centredness. Student Environment Interaction binds together items which involve pupils touching, operating, and manipulating materials, demonstrating competence at using equipment, conducting investigations, and responsibly handling materials which the teacher provides. A factor which involves the pupils not being in a state of anomie plus both the teacher and pupils displaying enthusiasm, curiosity, interest among other affective concerns was called Cohesive Affect. The factor set was completed by Pseudo-Inquiry, which seems to reflect a laissez-faire attempt at openness and inquiry.

Undoubtedly, data gathered utilizing the Walberg and Thomas (1971, Appendix) instrument on openness, which was developed from the themes of the open classroom discussed in the previous section, could have been factor analyzed, although this is not as yet available.

It would offer data on the construct validity of the themes and at the same time it might suggest other concepts useful for the open classroom.

A Case Study This writer developed an operational framework of an open school from two years of observations within a private elementary school which has modelled itself within its own needs after the informal classroom (Butt, 1975). The supervision of teaching interns in the classroom(s) during two and three days each week required a close working relationship with the staff of the school and afforded intimate contact with its day-to-day operations. The framework which best suited the school emerged from many anecdotal observations. It was found necessary to have two dimensions; one which represented the operational element of any school, and another which reflected the open classroom. Operational elements included the environment, time, teacher, and curriculum and instruction; elements within the dimension pertaining specifically to the open classroom were Structure, Flexibility, Authenticity, and Student Activity. Figure 11 presents a description of the operation of the school within the framework described above.

Comparative Analysis The work of Barth (1970, 1971); Bussis and Chittenden (1970), Walberg and Thomas (1971); Butt and Wideen (1974); Butt (1975); Tuckman (1974) contribute insights to the operation of the open classroom. This section will consider the relative merits of this work in order to facilitate the identification of candidate concepts for the conceptual system of the open classroom. The role of the teacher in the open classroom had not been clearly

CONCEPTUAL ↔ CONSTRUCTS	ENVIRONMENT	TIME	TEACHER	CURRICULUM & INSTRUCTION
STRUCTURE	Flexible building, not all open, "nooks and crannies", sight & sound screens. Abundance of materials & equipment. Some special rooms - Music, Art, Gym, etc. School grounds planned adventure playground, interesting objects etc.	Large blocks of time interspaced with definite scheduling of specialist room and staff.	Staff have planning meetings daily, weekly to discuss program, curriculum change, innovation, problems, individual children, resources. Home room teachers provide overt and covert facilitating structures for children to meet goals. Minimising of direction as each child's independence grows.	Much time spent on integrated themes, together with basic skills in math and L.A. Not the usual neglect of other "subject" areas found in other schools. Process objectives emphasised not content.
FLEXIBILITY	Moveable partitions, furniture. There are spaces in size and character for almost any group or purpose. Long term and short term changes as different needs evolve.	Large blocks of time allow for flexible scheduling of home base groups, subgroups, individuals. Time may be changed on a day to day or long term basis - to suit evolving needs of pupils.	Teacher role flexible and varied to suit needs of each student, and changing situations. Teacher team acts as a pragmatic screening device for change and innovation. Teachers professional growth very active; they read, discuss, share, attend conferences, workshops, etc.	Total curriculum has evolved with the school and clientele. It is malleable and ductile enough to be adapted to the needs of children and staff. Topics chosen with interest and motivation in mind.
AUTONOMY	Ample opportunity for pupils and teachers to make choices and decisions about where they wish to work from hour to hour, day to day, depending on purpose. Similarly, in terms of materials utilized and needed. Each child has home base.	Pupil determines to a large extent, his activities during flexible parts of day within constraints provided by teacher. Teacher determines remainder of daily plan, bearing in mind constraints of specialist rooms and staff. Each childs schedule is designed by the pupil to meet his own needs. Teacher initials it.	Teacher able to make many decisions about day to day operation. They have responsibility and control over curriculum and instruction. Do not follow a prescribed course - generate own curriculum.	Day to day substantive content subject to a good deal of pupil and teacher choice. Instruction is pupil centred, inductive low expository role for teacher active inquiry for child.
STUDENT ACTIVITY	Open psychological climate. Environment maximizes P-E, P-P interaction. Group size varies from 1-10, rarely more than 15. Mobility high. Family grouping.	Groups form and disband to follow different purposes during the day. Each student records activities (resumé) which the teacher examines periodically.	In interacting with students the teacher may be: co-ordinator, initiator, recorder of progress, counsellor, animator, remediator, arbitrator, facilitator, implementor of child's purposes.	P-P & P-E interaction high. T-P mostly inquiry oriented, with some remedial tutoring. Inquiry, discovery, personal reading and research, active group work, creative endeavours field trips all feature.

Figure 11: Two dimensional framework representing a case study of an open school.

explicated until Bussis and Chittenden (1970) undertook the task. Whereas this was extremely valuable in terms of the function of teacher preparation, it unduly biased the work of Walberg and Thomas (1971) in preparing their questionnaire. This is confirmed by the fact that an examination of their observational instrument reveals that only fourteen of forty-two items are directly concerned with what the children actually do, the remainder focus on teacher actions. The items pertaining to children do not tap student independence, choice, decision-making, and planning. The questionnaire, therefore, cannot validly measure the implementation of the child's own purposes. In attempting to develop an instrument for measuring the open classroom within a classroom setting Walberg and Thomas (1971) have used a base which over-emphasizes the teacher and have failed to factor-analyze data which would comment on construct validity of their operational framework.

Tuckman (1974) developed his notions of the operation of an open classroom prior to investigating the empirical relationships between the open classroom and student outcomes. Naturally, his conceptualization includes more child-oriented elements than Bussis (1970) or Walberg (1971) since there is more likelihood of relationships being detected between children's actions and outcomes than the indirect acts of a teacher. His scheme includes grouping, student activity, and student centredness, but again it appears that insufficient attention has been paid to student autonomy. In contrast to Bussis and Walberg, he has no direct teacher factors, but does pinpoint warmth and acceptance in human relationships.

DISC (Traub et al, 1972) approached the problem of describing the open classroom from the question as to how the program is organized for instruction. This necessarily gives their lengthy questionnaire an administrative flavour, which may or may not be the optimum approach for investigating the open classroom. Besides administrative or programmatic elements, however, DISC contains many items concerned with levels of decision making and what the student does. Furthermore, factor analysis of DISC data gave two environmental factors, one teacher factor, and three pupil factors: Non Gradedness, Student Independence, and Individualization. These seem to place the administrative flavour in its proper perspective, except that no items (therefore no factor) emphasize climate, relationships, or other affective concerns.

The instrument developed by Butt and Wideen (1974) includes thirty-nine items, twenty-two of which are directed towards children's activity, fourteen involve the teacher, and three the environment per se although environment is implicit within some pupil and teacher items (e.g. students interacted with materials, conducted experiments). This instrument appears to be strong in terms of pupil behaviour, having enough items in this area for specificity of pupil actions including Student Authenticity. This factor is concerned with the child's own purposes via choices, decisions, and plans, and represents a recurring theme in the literature describing live open classrooms. The instrument appears to be weak in the attention it pays to the environment and teacher interventions but these may be implied within student factors, as facilitative acts. For example, "Teacher

encouraged students to question and theorize" occurs within the factor Student Authenticity along with several student items. Furthermore, "Student touched, operated, and manipulated materials; showed competence at using apparatus, conducted experiments, and handled materials responsibly" (Butt & Wideen, 1974, Appendix) is supplemented by "Teacher provided materials" to make up the Student-Environment Interaction factor.

The necessary positive affective climate which is claimed to help and result from the open classroom emerges in Cohesive Affect where both teacher and student exhibit interest, enthusiasm, and are otherwise turned on to what they are doing, perhaps representing a link between the affective and cognitive domain. This factor does not occur in other frameworks. The Butt and Wideen (1974) rating scale, however, does not contain an explicit element concerning the humaneness or warmth and acceptance of relationships evident in other frameworks.

The purpose of the case study (Butt, 1975) was to capture what appeared to be the fundamental operational framework of the school. The concepts it included, flexibility, structure, student activity, and authenticity, seem quite basic to the open classroom: the child needs both structure, on which he depends to facilitate his activity, and flexibility, which he needs to escape from external structure and dependence to move towards the self structure of independence and expression of authenticity. It must be noted that authenticity also applied to the teacher.

All of the foregoing operational models of the open classroom may be viewed quite readily through the basic interactive framework

discussed at the outset of this section. Figure 12 presents an illustration of the scope and content of these operational frameworks.

Emerging Concepts

Viewing the collection of operational conceptualizations as a whole, in order to identify emerging concepts, there seems to be a strong environmental theme with flexibility and structure as sub-themes. Student activity is emphasized; this may be subdivided into degrees of authenticity, ranging from student interactions with each other and the environment under explicit teacher direction, through student centredness, individualization, independence, to free choice, decision-making, and self-expression. Relationships, another pre-dominant theme, can be subdivided into humaneness and genuineness of interpersonal transactions and cohesive affect, which is concerned with both teacher and pupils feelings towards what is being learned. The role of the teacher is represented explicitly by Bussis and Chittenden (1970) but is also implicit as a supporting or facilitating infrastructure of the student themes of the other frameworks.

Perhaps an overall weakness of these operational frameworks is the neglect of the quality, quantity, substance and style of teacher interventions. Important themes which are apparent in previous sections which do not appear with a strong emphasis here are curriculum integration, wholeness and continuity of experience, although they are implicit within Barth's (1972, pp. 63, 66) notion of personal knowledge.

The concepts which emerge from this analysis are diagramatically

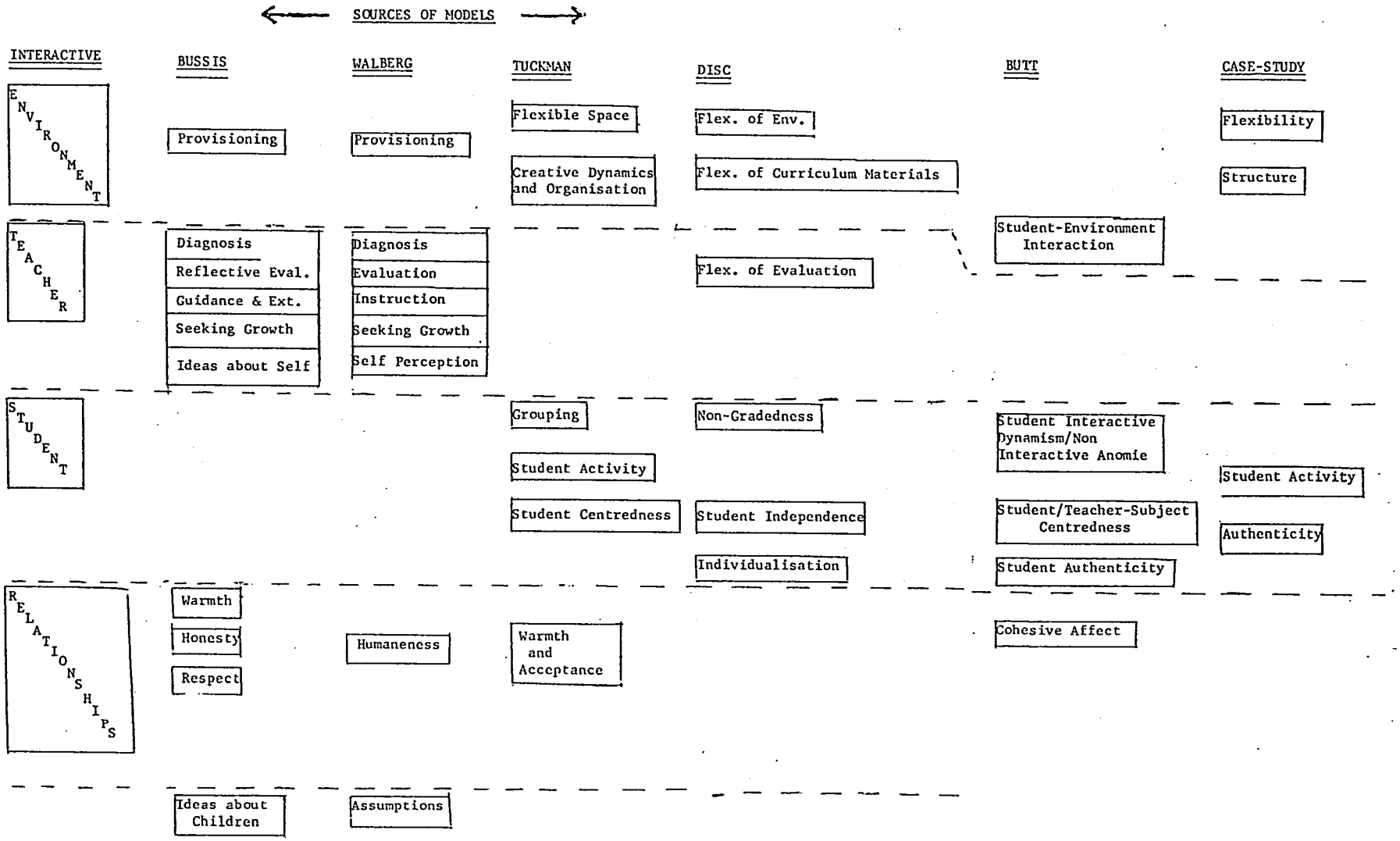

Figure 12: Diagram illustrating scope and content of operational frameworks for the open classroom.

represented in Figure 13, which illustrates the cumulated tentative conceptual network which has emerged from the intellectual vanguard, developmental influences, and operational frameworks of the open classroom. What the operational frameworks have added to the previous conceptual network (see Figure 8) includes a detailed and practical role for teach as facilitator, a clustering together of the child's interests, choices, and activity under the notion of authenticity, and the balance of flexibility with structure in the learning environment. The climate of the classroom has also been described more fully. The separate contributions of child, environment, and teacher are represented and brought together to constitute the learning environment. The teacher's role as facilitator involves providing a rich material environment, and observing children to provide a base for making various types of interventions. The environment is maintained as a whole and provides concrete materials organized in such a way as to allow sufficient flexibility for pupil authenticity, but with enough structure to facilitate and guide in areas in which the pupil is not competent. The two roles of teacher and environment are brought into confluence with the child's natural way of learning. The child in conjunction with teacher and peers elects choices and decisions resulting in activity, experience, and learning. This is facilitated and conducted within an open psychological climate.

Summary

This chapter has conducted the exploratory phase of the procedure for developing a conceptual system for the open classroom,

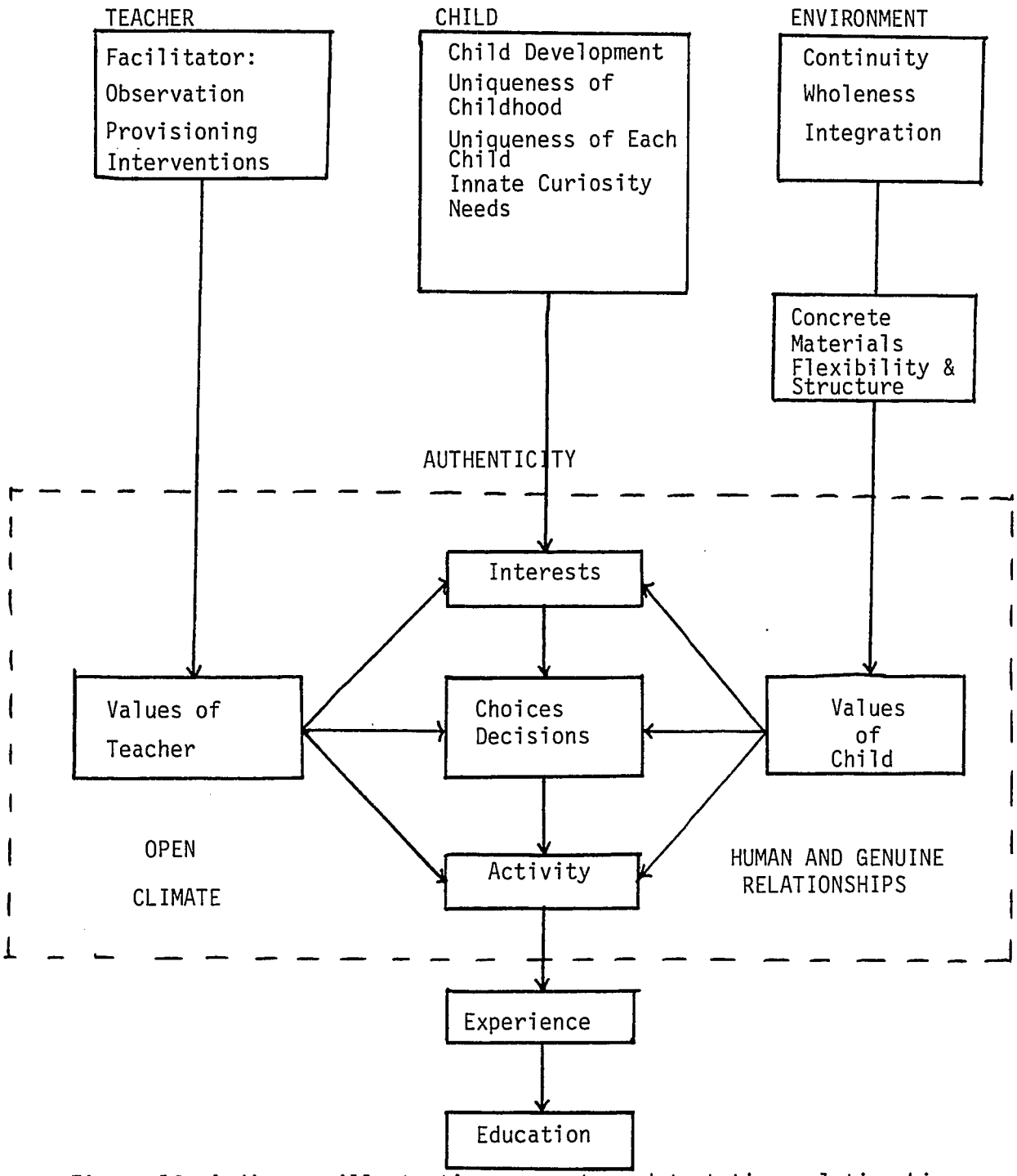

Figure 13: A diagram illustrating concepts and tentative relationships which emerge from the historical roots, developmental influences and operational frameworks for the open classroom.

The first section examined literature pertaining to the live open classroom in order to establish a preliminary reality base for theorizing. The second section addressed itself to the metatheoretical base for the study in terms of both the type of theory envisaged and the manner by which it is to be developed. The final section of the chapter was concerned with enunciating concepts and relations which might form part of a conceptual system. This was achieved by examining literature pertaining to the historical roots and development of the open classroom, as well as recently developed operational frameworks. Figure 13 represents the conceptual network which cumulated from three sources of analysis. Since this step of the exploratory phase was intended to be divergent in character, no lengthy analysis or judgement of the partial conceptual networks was made. This will be undertaken in the subsequent chapter which will conduct the integrative phase of the study.

CHAPTER IV

INTEGRATIVE PHASE

Introduction

The purpose of this chapter is to conduct the integrative phase of the study. It consists of two stages, the first being the identification of a preliminary value base which is comprised of the beliefs, values, and assumptions held by open educators. This step, besides making values explicit as a necessary part of prescriptive theory construction in the applied disciplines, serves to provide a guide in the assessment and integration of concepts enunciated in the previous chapter into a conceptual system. It also acts as a guide in the search for invented concepts or constructs which may unify and explain the phenomenon of the open classroom, and thus bring the conceptual system to the level of theory. This latter activity constitutes the second step of the integrative phase which is to search for integrating and unifying concepts.

Identification of Preliminary Value Base

The previous chapter mapped the open classroom in action, and examined its historical roots, development, and various operational frameworks. It is now necessary to consider the set of values inherent in the assumptions, beliefs, and feelings of open educators. This value base may then be utilized as an additional guide to emerging concepts, tentative relationships, and integrating concepts.

Category 5 writings comprise the literature from which the preliminary value base will be established. All writings which examine, to a significant extent, the rationale, idea or assumptions which undergird the open classroom approach to education, are potential sources of values. An attempt has been made to identify authors who are appropriate for inclusion in Category 5. They are: Barth (1970, 1972); Blitz (1973); Rogers (1972); Stephens (1974); Walberg and Thomas (1971) and Weber (1971). To claim, however, that this list is exhaustive and complete would be unwise, bearing in mind the magnitude of existing literature pertaining to the open classroom. This list, however, is deemed to be representative of the ideology of the open classroom.

Barth (1972, p. 3); Blitz (1972, p. 16) and Weber (1971, p. 169) have written of the necessity of accepting and understanding the idea behind the open-classroom approach, and that it be firmly accepted and understood in order to provide a base for practical implementation. This underlines the fundamental role of inherent values in generating the reality of the open classroom.

A useful approach for examining Category 5 literature is provided by Barth (1972, p. 551) who stated that the idea which generates open classroom reality "is a way of thinking about children, about learning, and about knowledge." Discussing the ideology of the open classroom in these terms which may be considered essentially descriptive provides for the derivation of statements concerning the facilitation of learning, which are essentially prescriptive. The value base of the open classroom will therefore be discussed in terms of the nature of the child, the child's way of learning, and the view of knowledge which together provide for the derivation of a fourth category of statements, the facilitation of learning.

The Nature of the Child

The notion that is probably most central to the ideology of the open classroom is that each child is innately curious about himself and his surroundings (Barth, 1972, p. 18; Rogers, 1969, p. 157; Walberg & Thomas, 1971, p. 61; Weber, 1971, pp. 173, 183). This curiosity, it is thought, predisposes the child to exhibit self exploratory behaviour (Barth, 1972, p. 19; Walberg & Thomas, 1971, p. A61) which Weber (1971, p. 173) describes as the child's active construction and reconstruction of his own development. Implicit within the child's role as an active agent in his own development are the child's own purposes and questions (Weber, 1971, p. 1973).

It is believed that self-exploratory behaviour is more likely to emerge if the child is not threatened, and that children will engage in activites which are of high interest to them (Barth, 1972, p. 21).

As a result of learning from these activities and maturation children pass through similar stages of development, but each in their own way, at their own pace, and via their own questions (Barth, 1972, p. 32; Stephens, 1974, pp. 12-15; Weber, 1971, p. 174). So while children are similar in significant ways, they are also unique and different (Blitz, 1973, p. vii).

Each child's activities are exhibited within an egocentrism which is not thought to be undesirable. Egocentrism is viewed as natural (Stephens, 1974, pp. 12-15; Weber, 1971, pp. 176-177), serving to develop a concept of self in relation to the child's environment. A child, therefore, should not be forced to leave egocentrism. It matures and takes on other forms as the child implements his own purposes, and is "corrected through companionship with other children and interaction with their different purposes," (Weber, 1971, pp. 176-177).

From the above standpoint, childhood is viewed as having value in and of itself, since each stage influences current growth and development (Stephens, 1974, pp. 12-15). A child's life and experiences, therefore, should not be viewed primarily as a preparation for adulthood and the future, but are"justifiable in themselves and are not dependent upon future performance for justification"(Walberg & Thomas, p.A70).

The Child's Way of Learning

The nature of the child just discussed offers potential, predisposition, and motivation for learning, and forms the basis of activity in the classroom (Walberg & Thomas, 1971, p. A61). According

to open educators the best way to ensure that the potential of each child is utilized for learning is to make each child the active agent in his own learning (Weber, 1971, pp. 172, 183). This measure of self control increases the probability that the learning will have relevance to the child's own purpose(Rogers, 1969, p. 157) since he will be making significant choices and decisions regarding the materials and questions with which he will work (Barth, 1972, p. 26). It also enables the child to learn at his own pace and his own style (Barth, 1972, p. 32; Walberg & Thomas, 1971, p.A65; Weber, 1971, p. 174) in the slow progress toward concept formation (Barth, 1972, p. 31). Rogers (1969, p. 157) states that this "self-initiated learning, involving the child person of the learner - feelings as well as intellect - is the most pervasive and lasting", especially when self-criticized and self-evaluated. All of this process is thought to build confidence insself which is highly related to capacity for learning (Barth, 1972, p. 21; Weber, 1971, p. 184).

Open educators assert that the child learns best through active manipulative exploration in a rich environment, including a strong role for fantasy and play (Barth, 1972, p. 23; Rogers, 1969, p. 157; Walberg & Thomas, p. A65; Weber, 1971, p. 175). Continuous concrete experiences are thought to form the sense base from which abstractions are formed (Weber, 1971, pp. 178, 181). Walberg and Thomas (1971, p. A64) warn that "premature conceptualization based upon inadequate direct experience leads to lack of real understanding and dependence upon others for learning."

From the above it is evident that open educators believe that "children have both the competence and right to make significant decisions concerning their own learning" (Barth, 1972, p. 26) with varying degrees of support (Walberg & Thomas, 1971, p. D10). The most important skill to the individual child, therefore, is to learn how to learn. (Rogers, 1969, p. 157; Walberg & Thomas, 1971, p. A75).

View of Knowledge

The fact that young children learn via concrete experience and cannot think abstractly requires an appropriate view of knowledge. The open educator's view of knowledge has been made most explicit by Barth (1970, 1972, pp. 44-55) with some support from Walberg and Thomas (1971, pp. A66-67). For young children who cannot think abstractly knowledge is a personal matter. It is idiosyncratic, being a function of a child's synthesis and integration of experiences. It does not fall neatly into separate disciplines.

Open educators do not believe that there is a body of knowledge that everyone should know. Lastly, knowledge does not depend on public expression, that is, if a child cannot express a particular portion of knowledge does not mean that he does not know it (Barth, 1972, pp. 46-47).

Facilitation of Learning

The foregoing discussion of the nature of the child, the child's way of learning, and the view of knowledge held by open educators, leads to prescriptive guidelines for the facilitation of learning in the open classroom.

Weber (1971, p. 177) set the tone of instruction for the open classroom when she observed that instead of teaching a child, it is better to create environments which will give the child the opportunity to learn for himself. These environments should "extend the child's natural way of learning" and maintain the momentum of the forces of a child's development (Weber, 1971, p. 170). She also suggested that the teacher should find out what the child needs. "What is he interested in? What is he ready for? What are his purposes? How does he follow them? What are his questions?" (Weber, 1971, p. 170).

Fundamental to facilitating and extending the child's natural way of learning is the provision of a rich material environment and experiences appropriate to the child's developmental level. A combination of flexibility for the child to choose questions and materials together with a support structure to help him explore them is thought to optimize learning (Barth, 1972, pp. 95-96; Blitz, 1973, p. viii). Since the child should be free to pursue these interests as long and as deeply as he wishes, time should be flexible and individualized. Interests naturally transgress discipline barriers, therefore, the curriculum may be quite integrated (Walberg & Thomas, 1971, pp. A61-62).

The climate of the open classroom, following from the previous sections in this chapter, is one of openness and trust, as free as possible from fear and threat (Barth, 1972, p. 21; Walberg & Thomas, 1971, pp. A69, 70, 72). The environment is thought to bring out and reinforce desirable behaviour (Stephens, 1974, pp. 12-15) within a few reasonable, consistent, and explicit rules (Walberg & Thomas,

1971, pp. A71).

Barth (1972, pp. 37-41) and Walberg and Thomas (1971, pp. A68-69) pinpointed the fact that the traditional manner of evaluating pupils is inappropriate for the open classroom and, indeed, may have a deleterious effect on learning. Instead, it has been advocated that a child's work, anecdotal records, teacher observation, and intuitive judgements over a long period of time are the best means of assessment.

Summary

This section has examined the ideology of the open classroom in terms of what open educators hold to be the nature of the child, his natural way of learning, his knowledge structure, and how, therefore, the child's learning can be facilitated and extended.

Integrating and Unifying Concepts

At the outset of this section it should be noted that the preliminary value base established in the previous section is consistent with and confirms the concepts which emerged from the previous chapter. The concepts identified in the exploratory phase, therefore, are valid candidates for inclusion in the conceptual system.

This section will utilize the preliminary value base to guide in the search for integrating concepts which explain and unify the open-classroom approach to education. An integrating concept is one which has relatively more power within the conceptual system in that it unites and accounts for other concepts. The integrating concepts will then be utilized to facilitate other tasks such as:"what subordinate concepts can be grouped together; and what concepts should be subsumed by others?

A notion which is common to all categories of literature examined so far is that the open classroom capitalizes on the child's natural way of learning and facilitates this by invoking supportive roles and relationships for the environment and teacher. Weber (1971, p. 11) most succinctly captured this idea when she characterized the informal classroom as:

> ...the setting, the arrangements, the teacher-child,and child-child relationships that maintain, restimulate if necessary, and extend what is considered to be the most intense form of learning, the already existing child's way of learning through play and through experiences he seeks out for himself.

The tentative conceptual networks which emerged from the exploratory phase of this study reflect this notion as does the value base established by the previous section. The overall supportive roles of the environment and teacher are defined by the nature of children, the way they learn, and what is known about their general needs and wants. The particular roles and relationships, however, of the teacher and the environment can only be established within "the situational Gestalt at the precise moment for the unique child with whom the teacher is interacting" (Walberg & Thomas, 1971, p. 7). The point of convergence, interaction, and intersection of what the child brings, what the environment brings and what the teacher can offer, has been pinpointed by Weber (1971, p. 170). She stated that the teacher should determine the child's needs, wants, interests, readiness, purposes, learning style, and questions. This information then allows for specific facilitation of learning, which Weber (1971, p. 11) called "the implementation of the child's own purposes."

It is at this key point in the open classroom that there is a need for a concept, at the operational level, which captures the practical touchstone of facilitating the child's learning. It is a point towards which all the determinants of each learning moment flow and from which the consequences diverge.

If open educators profess to trust and utilize innate curiosity and self-exploratory behaviour as a base for learning, then it is of utmost importance to determine what the child intends to do. This will enable the teacher to make the point of contact between herself and the child as fruitful as possible (Blackie, 1967, p. 4) and maximize the occasion (Silberman, 1972, p. 75).

Intention

Allport's (1963, p. 264) concept pf intention is appropriated here. It is defined as what the individual has elected, chosen, or is trying to do. Intention unifies its diverse determinants. Drive, need and instinct are brought together with rational choices, decisions as well as the personal interests of the child, to form intention. Also involved are the influences of other than self, such as teacher, peers, environment, home, family and culture. Despite outside influences, a child's intention is chosen or elected, and that makes it his. In this way, the concept of intention brings together diverse inputs and at the same time identifies and unifies the core of the open classroom. It brings opposites into unity. Nonrationality, rationality and irrationality are together; emotion is intricately connected with reason.

For any intention, the child has certain current capabilities,

skills and knowledge which contribute to the implementation of that intention. Those lacking must be contributed by the environment, teacher and peers, who provide the requisite facilitating structure for implementation. Whereas intention addresses itself to what the child wishes to do, the question arises as to how this coalesces with the intentions of society as represented by the teacher. The influence of the open-classroom climate and environment might be thought to maximize the possibility that socially-acceptable activity results (Hassett & Weisberg, 1972, p. 32; Weber, 1971, p. 136). The teacher, however, is still ultimately responsible (Dearden, 1968, p. 13). Furthermore, the teacher does have a set of preferred values, activities and learnings but does not impose them. Instead, that teacher attempts to enable a child's intentions to be confluent with her own. This is achieved by the way the teacher selectively provisions and structures the environment, and by her suggestions, comments, and other interventions.

The value of the operational concept of intention has been established to some extent, but there are other matters which will illustrate its usefulness further. Within an open-classroom approach:

1. It is very difficult to facilitate learning if a pupil's intention is not known. Random efforts to help a child learn would probably be ineffective and inefficient.
2. It is difficult for a teacher to know when and how to intervene, and for what purpose, if a pupil's intention is not known.
3. It is impossible for a teacher to aim for congruence or

confluence of her objectives and the pupil's intentions, if the pupil's intention is not known.

4. It is difficult to know which children should collaborate on an activity if each child's intention is not known.

Despite any philosophical or theoretical quarrel that might ensue as to the nature and relationship of its determinants, intention remains a very practical concept which is consistent with the philosophy of the open classroom. Having identified intention as a worthwhile operational concept for the open classroom, it is now necessary to search for higher level concepts which might explain its usefulness.

Higher Level Concepts

The implementation of intention within the classroom context may involve facilitation by the teacher and environment, as well as the actions of the child himself. These transactions are means to the broader and more important end of self-implementation of intention by the child. It is characteristic of intention that it is intimately concerned with self and directed toward the future. Involved in intention, therefore, is the building of self-image, self-identity, and self-concept. Rogers (1969, p. 5), as previously noted, has asserted that education of any significance must involve the self via (Rogers, 1969, p. 157) personal relevance, interests, involvement, activity, feeling, and intellect. The child, therefore, must be able to be his real and genuine self within honest relationships in the classroom (Bremer, 1972, p. 26) through the implementation of agreed intentions. Froebel (1886, p. 14; Schoenchen, 1940, pp. 17-18)

referred to the somewhat sentimental idea of unfolding the child's inner nature, which was more clearly explicated by developmentalists, and translated into the notion of self actualization by Maslow (1968). Long (1973, p. 39) saw Pestalozzi as an early advocate of self and independence which foreshadowed the existential idea of pupil freedom. Thus, the child, in the open classroom, has been viewed as the principal agent in the learning process, in his own search for definition and relevance (Belanger in Herbert & Ausubel, 1969, p. 99), so that "he would learn in his own way, at his own pace, exploring his own interests, for his own purposes" (Weber, 1971, p. 11).

Dearden (1968, p. 46) sees independence and personal autonomy based on reason as major aims in primary education. The open classroom makes notable emphasis of this theme as part of the development of self. It occurs repeatedly in the literature as perhaps one of its strongest characteristics (Blitz, 1973, p. 52; Bremer, 1972, Chs 3, 5; Gross, 1970; Hansen, 1971, p. 2; Hassett & Weisberg, 1972, p. 97; Silberman, 1973, pp. 107-108; Stephens, 1974, p. 26; Watson, 1971, p. 5; Weber, 1971, Chs. 1, 2, 4). The emphasis of student activity and independence was also evident within the factors which emerged from factor analysis in empirical efforts to analyze openness (Traub et al, 1972; Butt & Wideen, 1974). Within the literature examined in this thesis, a more detailed aspect of the development of self has been noted. The child making choices and decisions was implicit within the intellectual vanguard of the open classroom (Dewey, 1963, p. 67; Schoenchen, 1940, p. 18; Tolstoy, 1967, p. ix) but emerged more explicitly within literature pertaining to its development (Dearden, 1968,

p. 46; Long, 1973, p. 24; Maslow, 1968, pp. 9-16; Rogers, 1969) and operational frameworks (Bussis & Chittenden, 1970, p. 15; Butt & Wideen, 1974; Traub et al, 1972). Many other writers emphasize student choice and decision-making as an essential part of the open classroom (Armington, 1969, p. 6; Barth, 1970, pp. 16,34; Brown & Precious, 1969, pp. 14, 19; Cazden, 1971, p. 11; Rathbone, 1970, pp. 49-50, 83). What happens to the self of the child as a result of the foregoing transactions is held as being more important than the activities themselves or facts which accrue from them (Barth, 1972, pp. 59-64).

The search, therefore, for higher level concepts should be guided by the emphasis of self development in the literature pertaining to the open classroom. Being real, genuine, autonomous, independent, making choices and decisions, and self-actualization are all important features in this search. Of concepts revealed so far in this study, authenticity appears to account for most of the foregoing notions. Maslow (1968, pp. 9-16) associated the conceptsof authenticity with children choosing their own values so they can take responsibility for their own lives. He saw self actualization as a self-choice of internal values, therefore, meaning and existence. Halpin (1966, p. 204), in a thorough discussion of authenticity has described authentic behaviour as being one's real and genuine self instead of some role stereotype or conforming to external expectations. Authenticity is thought, therefore, to be a useful concept which accounts for the majority of the phenomena described in this section, including the operational concept of intention, and its self-implementation by the child.

Authenticity Since an examination of the notion of authenticity is in order, this subsection will offer a discussion of the concept per se and its application to education and the open classroom.

Trilling (1973) was impelled to use some word which speaks of the nature of being and the value put on it. This word, he thinks, is authenticity (p. 93); it subsumes sincerity and genuineness, and is the indicator of all that is the person. Trilling claims (1973, p. 93) that the idea of authentic personal being stands at the very center of Rousseau's thought; there being a passionate emphasis upon the individual's experience (in an active sense) of his existence. Authenticity can be destroyed by society (p. 93) when the sentiment of being becomes dependent on the opinion of other people, conformity and role stereotypes. Maslow (1968, p. 55) called this deficit-need-dominated behaviour; Halpin (1966, p. 203) saw this behaviour as producing "papier-mâche characters acting out their roles in a puppet show."

The type of alienation brought about by inauthenticity is thought to lead to some mental illnesses. Laing (1961, p. 39) utilized the concept of authenticity to explain schizophrenia as ontological insecurity. From his point of view, schizophrenia is a special strategy a person invents in order to live an unlivable situation (Laing, 1967, p. 115); one that demands that the person have a self which is not a true self. Thus, schizophrenia is seen as a response to the imposition of inauthenticity. When considering what conditions and means would maintain authenticity, (Trilling, 1972, p. 160), Trilling observed (p. 161):

> ...since the self of the infant can maintain its pristine authenticity only if the process of its maturation is self-determined, it follows that we must not give our assent to any form of rearing, education, or socialization in which any prescriptive influence (in the sense of outcome not process) has a part.

This leads to a consideration of the open classroom as a means for maintaining and fostering authenticity. At the same time the educational implications of the concept of authenticity may be checked against the reality of the open classroom in order to assess its validity as an integrating concept.

Moustakas (1967) attempted to examine the above implications through his notion of the authentic teacher. He discussed the sources of the betrayal of self within our present society and school system. Firstly, he cited failure to stay with universal values as a source of inauthenticity, whereby for example, the individual does not speak out when justice is violated, or a confidence or trust is broken. Secondly, the betrayal of self values "occurs in a situation where the individual rejects his own senses and accepts the perceptions and expectations of others" (p. 5). This loss of self through rejection of one's own faculties can be caused by the traditional model of education, as well as by ambitious parents, teachers, and superiors. Thirdly, the betrayal of unity and wholeness occurs frequently due to the fragmentation and compartmentalization of society and life. The fixation on intelligence and intellectual values is so extreme that spontaneity, spirit, wonder and other aesthetic and moral aspects of humans are left wanting. Schools with subjects, time and grades compound this problem (p. 9). The consequences of these phenomena are inauthenticity and alienation.

Having utilized sources of inauthenticity as a useful backdrop, Moustakas was then able to address himself to those conditions which facilitate the authentic growth of the individual with particular reference to the classroom. Moustakas (p. 9) like others feels that the potential for authenticity is present at birth. To realize this potential, the child needs freedom to be, to explore life, to express self spontaneously on the basis of his own interests and desires. Thus, the individual makes choices and decisions by willing, feeling and intending, the making of choices being a preliminary step in the creation of values. Having the capacity to choose together with choosing confirms being, deepens experience, and establishes further identity and authentic life.

In the classroom, with young children in their egocentric state, self-confirmation is important. The teacher, therefore, encourages the pupil to trust his own senses and organismic connection with life. In taking charge of his own life via this link, the child exhibits an early form of responsibility. Thus, the pupil, in making choices and decisions, learning from errors and successes, confirms self. As this early stage of responsibility is completed and egocentricity fades, he may then proceed to confirmation of others.

A variety and diversity of environments naturally supports the above conditions and provides the best means of stimulating and challenging interest and desire. Free experimentation with resources which confront and engage result in commitment and activity. Thus, "meaning emerges which forms a bridge between self and others" (Moustakas, 1967, p. 13).

Teachers, therefore, should:

1. Confirm the child's existence as a unique human being by interacting with respect.
2. Be authentically present, that is, be genuine and not play roles.
3. Provide resources and opportunities.

Although the concept of authenticity appears to champion that which is unique to the individual, being oneself entails both that which is unique and that which one holds in common with others. In this way, the concept of authenticity, that is, being oneself, accounts for the expressions of that which is innate (curiosity, self exploratory behaviour, needs the maturational process), that which is socially, culturally and individually learned (wants, desires, customs, interests) and that which is uniquely existential (choices and decisions). For educators in the open classroom who facilitate growth toward self implementation of intention, it is essential to consider the child as he is and link this incrementally to what he wishes to become. This involves an intricate knowledge of child development and the unique child, together with a regard for childhood as a distinct and useful phase of life.

This subsection has illustrated how the concept of authenticity accounts for major aspects of the phenomena evident in the open classroom, particularly the development of self through the implementation of intention. A major portion of the literature was cited to demonstrate that the child's behaviour in the open classroom is consistent with being authentic. In particular Maslow (1968, pp. 9-16),

Halpin (1966, pp. 203 et seq.); and Moustakas (1967) offer direct support for the concept of authenticity as accounting for open-classroom behaviour, especially as regards the self implementation of intention.

There are other major aspects of the open classroom, however, which remain accounted for only at the operational level. The operational concepts of wholeness, integration, and continuity were used earlier to label certain strongly emphasized themes in the open classroom. The search for a concept at a higher level of abstraction to account for this aspect of the open classroom yielded the concept of synergy. This construct is important because it not only explains wholeness, continuity, and integration but also accounts for authenticity. It is superordinate to the concept of authenticity, since it subsumes authentic individuals and an authentic environment. This will be explicated in the next section.

Synergy The concept of synergy is not mentioned within the literature pertaining to the open classroom; however, as stated in the procedures outlined in Chapter II, the search for integrating concepts is not restricted to those writings. This subsection will, therefore, demonstrate how certain phenomena and events within the open classroom which pertain to the operational concepts of wholeness, integration, and continuity are accounted for by the notion of synergy.

A phenomenon is said to be synergistic when its differentsbits or internal functions optimize one another, so that the whole becomes more than the sum of the parts (Hampden-Turner, 1970, p. 187) All living things are examples of biological synergy. Synergy is the key

to how an organism defies, at least temporarily, the law of entropy, which is the tendency for a chemical system to degradate to its lowest energy level. A synergistic state in the biological realm is a synonym for life; a breakdown of that state means death (Hampden-Turner, 1970, p. 187 et seq.).

The concept of synergy can also be applied in other spheres. Problem solving involving conflicting poles or paradoxes may benefit from a synergistic approach where a common framework is identified which will unite opposites. Theory development exhibits this when a dilemma at one level of abstraction is unified by a concept at a higher level.Hampden-Turner(p190) has defined synergy simply as "optimal integration of that which was formerly differentiated."

Synergy then, explains the vague notion of wholeness and is a better explicator (than eclecticism) of the intuitive coherence of the sometimes conflicting bits and pieces of the idea behind the open classroom. There are many instances of the drive for synergy within the open classroom.

The first example of synergy is found within the teacher-centered versus student-centered dilemma which Bussis and Chittenden (1971, p. 15) solved. It is neither student nor teacher centered; nor is it a balance of power between the two poles but a co-operative endeavour. Both teacher and student occupy central positions in the classroom, offering joint contributions.

The fact that this relationship is hard to grasp for superficial observers had led to the misconception that the open classroom pretends to facilitate the development of the child's own values and existence

in isolation from the influence of teachers and peers. This is not the case. The teacher's active role manifests her values, needs, and interests. It is acknowledged that the teacher translates the educational objectives of society for the classroom, bringing them into confluence with the pupil's needs, interests, emerging values, and intentions (Berlak, 1975; Stodolsky, 1975, p. 113). This may be achieved for young children by utilizing play, activity, and experiences which are enjoyable and satisfying of childrens' intentions but, at the same time, meet teacher-held objectives. If, then, the prime contributors to curriculum for the open classroom are regarded as the teacher and the children then the following proposition of Unruh's (1975, p. 220) becomes appropriate:

> Curriculum development must seek to match learning experiences not only to desired outcomes but also to the learner's own perception of their needs so that their attention and efforts may become a motivational force.

This confluence and congruence of teacher and pupil intentions illustrates synergy in the open classroom. Both teacher and pupils assume decision-making functions in their areas of expertise and together fashion learning experiences. As the number and intensity of the multiple interactions and therefore links among teachers, pupils, and environment increase, so the whole process becomes synergistically responsive to their needs. Within this milieu, it is not a matter of independence versus dependence, but of their integration to autonomous interdependence. It is not a matter of individual versus societal goals but a confluence of both.

The second major area in which synergy is optimized is within the child-environment interaction. Since the open classroom can be said to attempt to create unity between the individual and the macrocosm by developing individual and social meaning, anything which may come between the child and the environment is minimized. Firstly, the teacher does not interpose as in the traditional model of education (Barth, 1972, p. 63). Secondly, the open-classroom approach does not enter the polemic argument of determinism of the environment versus free will of man; neither does it engage in the learning manifestation of this controversy: behaviourism versus cognitive learning. It unites them both but in a humanistic manner. The learning theory of the open classroom subscribes to whatever positive reinforcement works: but ultimately the optimum reinforcement is that which the child chooses. Authenticity is the ultimate reward.

In more concrete terms, the relationship between the individual and the environment is perceived as cyclic rather than linear in either direction. The environment certainly influences the individual but it in turn may be changed, influenced or perceived differently by the individual. Piaget (1964, p. 182) has explained it best within the framework of learning theory:

> When you think of a stimulus response schema, you think usually that first of all there is a stimulus and then a response is set off by this stimulus. For my part, I am convinced that the response was there first.... A stimulus is a stimulus only to the extent that there is a structure which permits its assimilation, a structure which can integrate this stimulus but which at the same time sets off the response. In other

> words, I would propose that the stimulus-response schema be written in the circular form.... I would propose that above all between the stimulus and response there is an organism and its structure.

The unity of child-environment interaction is maintained in other ways. There is minimal fragmentation of the classroom, school, and community. The classroom is integrated within the school by freedom of physical movement and by the social interactions between classes and ages (Hassett & Weisberg, 1972, Ch 5; Weber, 1971, pp. 29, 88). School assemblies, concerts and lunch hours are also utilized for this purpose. The local and community environment provides as much potential for learning activity as the classroom itself, and home and school are carefully integrated in many ways (Weber, 1971, pp. 31-34; 77-81; 94-100). These types of pupil-environment interactions maintain a curriculum that is integrated and not differentiated into separate disciplines. From these transactions, the child accrues knowledge which is personal and which integrates the individual and the environment by the development of meaning. Dewey's (1963, Ch 3) concepts of experience, continuity, and interaction are pertinent here. The best unity of child and environment is through experiences with the optimum continuity and interaction that are provided by the intention of the child. In Piagetian terms intention optimizes that the next environmental bit engaged by the child is appropriate for transfer from the external puzzle of the environment to the internal puzzle of schemata (Piaget, 1964; Wastnedge, 1968, p. 28).

Finally, the facilitation of learning within total teacher, child, environment transactions is synergistic. The teacher attempts to optimize the integration of flexibility and structure within each learning moment for each child (Hassett & Weisberg, 1972, pp. 32-39), so that he may choose and be authentic, but with the necessary supporting structure to implement his intentions. The open climate created by these transactions represents a synergistic summation of its separate elements.

The concept of synergy in accounting for the operational concepts of wholeness, continuity, and integration, also implicitly subsumes authenticity of teacher, child, and environment and their interactions. The concept of authenticity as applied previously to the self of the learner can now be extended to apply to other than self.

This subsection has illustrated how the concept of synergy accounts for major aspects of the reality of the open classroom, specifically with respect to the maintenance of wholeness, continuity and integration. The open classroom approach to education was seen to exhibit consistent manifestations of synergy within teacher, child, and environment transactions.

Other Clusters of Concepts

The foregoing integrating concepts provide a guide to the organization of subordinate concepts enunciated in previous phases of this study. These concepts need to be examined in order to determine if a fundamental construct will subsume them and act as a unifying device.

The cluster of concepts which include wholeness, integration, continuity and real world refers to the unfragmented utilization of knowledge and the environment for learning. The word which best captures the intent of this meaning as it applies to the education of a child is probably Dewey's (1963, Ch 3) concept of continuity, since continuity of experience is the aim. The cluster of concepts including student-activity, student-environment, student-student and student-teacher interactions is probably best represented by activity but with interaction (Dewey, 1963, Ch 3) as a parallel concept, since it, together with continuity, acts as a criterion for the quality of experience which results from activity.

The ethical milieu of important relationships which facilitates and, in turn, is created by the open classroom, is collectively dubbed climate, since, essentially, the psychological atmosphere is the whole that results from the sum of the parts. This concept is also congruent with other developments in educational theory which utilized climate as a useful concept (Halpin, 1966; Walberg, 1968).

Concepts pertaining to the teacher, who is the other major contributor to the open classroom, are quite detailed via the work of Bussis and Chittenden (1970) and Walberg and Thomas (1971),,perhaps too detailed for the level of generality of the conceptual system. The three main concepts which are cyclically related and which subsume other notions are observation, provisioning, and intervention. Observation of the child by the teacher builds the knowledge base from which the teacher can facilitate learning. She can then provision the classroom with materials which offer the best potential for the

child to implement his own interests or intentions. The knowledge base built from observation of each child as he interacts with materials enables the teacher to intervene to extend the child's natural way of learning. What occurs as a result of provisioning and intervention then builds on the observational base that the teacher must function from to facilitate future learning.

Summary

This chapter has constituted the integrative phase of the study. Firstly, it identified values which proponents of the open classroom hold, under the headings of the nature of the child, the child's way of learning, and the view of knowledge. From this descriptive base, a fourth set of statements was derived which was prescriptive in that it identified beliefs about the facilitation of learning in the open classroom. Basically, open educators view the child as exhibiting self exploratory behaviour which if utilized in active manipulative exploration within a rich environment, including a strong role for fantasy and play, will provide sufficient concrete experience to form the sense base for later abstractions. The child as the active agent in his own learning controls the pace, style, and content of activity by the choices and decisions he makes. Knowledge and curriculum become, therefore, idiosyncratic, being integrated into a coherent whole and not necessarily divided into separate disciplines. Facilitation of learning in the open classroom extends the child's natural way of learning. What the teacher does is guided by the the child's needs, interests, readiness, purposes and questions.

Using the value base and the reality base as a guide, a search for integrating concepts which accounted for, explained or unified the phenomena of the open classroom was conducted. This yielded three concepts. At the operational level the concept of intention was appropriated as accounting for much classroom level activity while remaining consistent with the philosophy of the open classroom. Two higher level concepts which accounted for, united, and explained intention and most other concepts were authenticity and synergy. Authenticity was used to account for the dominant theme of self-development which is evident within the open classroom. Synergy was seen as superordinate to authenticity in that it subsumes both an authentic learner and an authentic environment. It accounted for and explained the themes of continuity, wholeness, and integration besides other phenomena in the open classroom. The next chapter will present a formal statment of the conceptual system including the roles played by the foregoing integrating concepts.

CHAPTER V

THE CONCEPTUAL SYSTEM

Introduction

This chapter presents a conceptual system for the open-classroom approach to education as a part of the formal phase of this study. Firstly, a reality base for the conceptual system is stated. This denotes the phenomena, subjects, and set of events which the conceptual system will describe and explain (Beauchamp, 1975, p. 82; Nuthall, 1968, p. 31; Glaser & Strauss, 1967). Secondly, a value base is stated which explicitly indicates the values, beliefs, and assumptions that proponents of the open classroom hold to be true (Beauchamp, 1975, p. 82; Petrie, 1976, p. 11). Thirdly, the type of theory most appropriate for the open classroom is described in the meta-theoretical base (Snow, 1973, p. 79). Following this preparation, integrating concepts which unite and explain the open-classroom approach are defined. To complete the conceptual system, other major but subordinate concepts and their relationships are assembled into a model representing the ideal functioning of the open classroom. These subordinate concepts are defined and the nature of the model and its relationships are explicated.

Reality Base

Phenomena

The phenomena to which the conceptual system refers are known collectively as the open-classroom approach to education.

The study focuses on the open classroom as a means to reach agreed ends. The general end is education which is defined as the development of individual and social meaning. This general aim is ideologically characterized in terms of specific learning outcomes for the open classroom by Rathbone (1972, p. 527).

Subjects

The subject of this approach is the unique child. The open or informal classroom was developed originally for nursery and infant school children in Britain (Weber, 1971). These children range from three to seven years old. The open classroom in North America focuses on this age range as well, although attempts have been made to extend its application both in Britain and North America to the older elementary school child.

Events

The events to which the conceptual system refers are the interactions among children, teacher, and materials which originate from the open classroom.

Events in the open or informal classroom promote the child as the principal agent in his own learning (Weber, 1971, pp. 172, 183; Belanger, 1969, p. 99). Children's main interactions are with each other and the environment, within flexible learning groups organized around common interests. This individual approach requires a freedom of

mobility, much social interaction, co-operation and sharing of ideas (Blitz, 1973, p. 52; Stephens, 1974, p. 26; Tallboy, 1974, p. 9).

The environment which supports such activity is vast and diverse, including multiple materials inside the classroom, and the environment of nature and the community outside. The classroom may be decentralized into various learning areas such as: a workshop, math centre, nature table, animal corner and quiet carpeted nook for reading from the many classroom books. The children may make free use of the school grounds for activities as well as go on numerous planned field trips to local places of interest (Weber, 1971, pp. 18-30, 81-88).

Contrary to the misconception that the teacher has a rather limited role in the open classroom, quite the opposite is true (Belak, 1975; Bussis & Chittenden, 1970, p. 15; Stodolsky, 1975, p. 113). The teacher makes a high contribution to the activities of the open classroom. She facilitates the foregoing transactions among children and materials in ways which are distinctly different from the behaviour of the conventional or traditional teacher (Bussis & Chittenden, 1970; Walberg & Thomas, 1971, pp. 12-15). She provisions the classroom with a reservoir of resources, ideas, junk, problems, potential projects and inquiries, as do the children themselves. She carefully selects materials, structures the learning environment, promotes and provokes interactions with learning potential for both her goals and children's purposes (Barth, 1972, pp. 65, 69). She observes, diagnoses problems, and evaluates; intervening in a manner and at a time which is appropriate for each situation and child. Her knowledge of the unique child, his background needs, interests, and learning style facilitate her approach for each learner.

Within this open climate and supportive relationships, the child has the freedom and opportunity, as far as he is presently able, to initiate, implement and explore his own choice of activity based on plans and decisions he has made. The teacher provides a flexible but definite support structure for the child's activity.(Hassett & Weisberg, 1972, pp. 32-39).

Thus the curriculum for the open classroom consists of intended learnings which emerge from the parallel and joint choices and decisions of pupils and teacher (Bussis & Chittenden, 1970, p. 15). These learnings are integrated quite often without the curriculum being organized into separate subjects and a lock-step timetable (Weber, 1971, pp. 89-94).

Since the detailed curriculum is different for each child, so is the knowledge accrued by the child. "Particular experiences, then, are integrated by the child in relation to what he considers important" (Gordon, 1972, p. 10). Knowledge in an open classroom is therefore what happends to the child as a result of experience rather than being the discipline content of more conventional classrooms (Barth, 1972, pp. 63-66).

The milieu within which the events of the open classroom take place emphasizes a continuity and wholeness of environment, classroom, and school, home, community and school, and children of different ages. The school itself is operated as a community with common gatherings, projects, social life, co-operation, helpfulness, rules and customs (Hassett & Weisberg, 1972, Ch 5; Weber, 1971, pp. 29-34, 77-81, 88, 94-100).

The open-classroom approach does not include these misconceptions: that all children are well behaved all the time and therefore discipline is unnecessary; that the teacher provides materials then fades into a passive role; that neatness, accuracy, perserverance, and competence in the basic skills are inferior goals, that the open classroom is unstructured and only child-centered (Berlak, 1975; Bussis & Chittenden, 1970, pp. 15-25; Hassett & Weisberg, 1972, p. 32; Stodolsky, 1975; p. 113; Weber, 1971, pp. 109 ,136). Having established the portion of reality to which this theoretical endeavour is directed, it is now necessary to indicate the values which pertain to its operation and which will guide decisions regarding the conceptual system.

Value Base

This section will state the common values, beliefs, and assumptions held by proponents of the open classroom. This set of statements is derived from the preliminary value base in Chapter IV. In terms of the conceptual system, it provides both a device for judging its validity and acts as a source of concepts and relationships. The statements have been arranged in a logical fashion with as much internal consistency and validity as possible.

Since the open-classroom approach depends on extending the child's natural way of learning (Weber, 1971, p. 11), the value base is divided into statements which can pertain to the child prior to invoking the benefits of instruction, and those which apply specifically to learning and its facilitation when instruction is invoked. Within each of these two subsets of the value base superordinate and subordinate statements are indicated.

In Situations Where Facilitation by Others is Absent

As with any successfully surviving and evolving organism, which is able to both adapt to the existing and changing environment and to change the environment in ways which are useful and harmless to itself, one most fundamental characteristic of the child in terms of the concerns of this study is as follows:

1.0 Children exhibit innate curiosity and self-exploratory behaviour (Rogers, 1969, p. 157; Walberg & Thomas, 1971, p. A61; Weber, 1971, pp. 173, 183).

Subsumed under this and all statements referring to different forms of self-exploratory behaviour is:

1.1 Self-exploratory behaviour may result in learning and education (Walberg & Thomas, 1971, p. A61).

Some of this behaviour is influenced by maturation and in turn influences development so that:

2.0 Childhood has value in and of itself, each stage having evolved a purpose for growth and development (Stephens, 1974, pp. 12-15).

2.1 Learning, for children, at their stage of development is best facilitated by active, concrete, and manipulative experiences which in turn facilitate abstraction (Barth, 1972, p. 23; Robergs, 1969, p. 157; Walberg & Thomas, 1971, p. A65; Weber, 1971, p. 175).

2.2 Play is one of many types of self-exploratory types of behaviour and as such is a valid activity for facilitation of learning (see references in 2.1 above).

The following statement represents a recognition of aspects of that which is common to all children together with an acknowledgement of children's ultimate uniqueness.

2.3 Children pass through similar stages of development, though each does so in his own way, rate, and occasion, making each child unique and different (Barth, 1972, p. 32; Blitz, 1973, p. vii; Stephens, 1974, pp. 12-15; Weber, 1971, p. 174).

This leads to statements regarding each unique child, but one must bear in mind the commonalities which bind unique children together:

3.0 A child's behaviour is naturally egocentric, usefully serving his own broad array of needs for survival, development, and identity (Stephens, 1974, pp. 12-15; Weber, 1971, pp. 176-177).

3.1 A child's activities serve to develop a concept of self in relation to the macrocosm via his own purposes (Weber, 1971, pp. 176-177).

3.2 There is a cyclic relationship between self-concept and learning (Barth, 1972, p. 21; Weber, 1971, p. 184).

3.3. A child has the competence to make significant decisions at his level of operation regarding activities in which to engage for his own purposes (Barth, 1972, p. 26).

3.4 A child will choose to engage in activities which are of high interest in him, individually, or if common interests exist, in groups (Barth, 1972, p. 21).

The following statements pertain to what accrues as a result of experience gained from the foregoing self-exploratory behaviours:

4.0 Knowledge (which subsumes learning and education) for a child in his egocentrism is a personal internalization and integration of experiences into cognitive structures (Barth, 1972, pp. 44-45; Walberg & Thomas, 1971, pp. A66-67).

4.1 A child's knowledge is therefore personal and idiosyncratic, and does not fit neatly into separate disciplines or sets of learning outcomes (see references above).

4.2 Acquisition of knowledge for a child is therefore best facilitated by experience which emanates from self-exploratory behaviour, that is, via the purposes of the child (see references for 4.0, Weber, 1971, p. 170).

In Situations Where Facilitation by Others is Present

The foregoing statements have set forth the related beliefs

of proponents of the open classroom with regard to what might be called the child's natural way of learning and developing meaning. The following statements imply facilitation by others.

Educators of any ideology, to justify their existence, claim that a lone child's efforts are limited in many ways which the efforts of others may overcome; furthermore, a successful species and culture has a store of social and culture wisdom which must be maintained, adapted and expanded for further survival. The fact that others are involved in deliberate attempts to facilitate the education of children leads to the following statement which applies to any educator, including proponents of the open classroom:

> 5.0 The deliberate facilitative acts of others (peers, adults, teachers) can provide the child with better learning and education that the child alone can provide.

Proponents of the open classroom, however, would operationalize the above statement in ideological terms by claiming that most often, the better method of facilitating learning and education for most children is to capitalize on the child's natural way of learning, the major role of the facilitator being the provision of experiences which the child alone could not provide. This activity in itself carries with it embedded cultural wisdom and values. The following statements therefore follow:

> 6.0 The intervention of others (peers, teacher, and adults) in concert with the self-exploratory behaviour of the child with materials and the environment (instruction, teaching) may optimally facilitate learning and education provided (Weber, 1971, pp. 11, 170, 177):

6.1 The child is valued as a unique human being, treated with kindness, courtesy and respect (see references for 6.2).

6.2 There is a warm emotional climate, with openness and trust (Barth, 1972, p. 21; Walberg & Thomas, 1971, pp. A69, 70, 72).

6.3 There is sufficient congruence of purposes, objectives, and means (Weber, p. 170).

6.4 The child is not threatened, with fear of errors or mistakes being minimized (see references for 6.2).

6.5 The environment is provisioned richly with manipulative materials (Barth, 1972, p. 23; Rogers, 1969, p. 157; Walberg & Thomas, 1971, p. A65; Weber, 1971, p. 175).

6.6 The environment provided is responsive to the needs and interests of the unique child and his learning characteristics (Barth, 1972, p. 95-96; Blitz, 1973, p. viii; Weber, 1971, p. 177).

6.7 The materials made available are perceived by the child to have relevance for his own purposes (Rogers, 1969, p. 157; Weber, 1971, p. 170).

6.8 The activity is self-initiated (Rogers, 1969, p. 157).

6.9 The child is free to select his own problem and questions (Barth, 1972, p. 26; Weber, 1971, pp. 172,.183).

6.10 The pupil is encouraged to engage in active behaviour with materials (see references for 6.5).

6.11 The child can pursue an activity as deeply and for as long as the pursuit is satisfying (Walberg & Thomas, 1971, p. A61-62).

Within the learning situation, proponents of the open classroom believe that:

7.0 Children are capable of both desirable and undesirable behaviour, as judged by the values of adults (see reference for 7.1).

7.1 Desirable behaviour is more likely to evolve if the child is exposed to an environment which postively

reinforces that behaviour (Stephens, 1974, pp. 12-15; Walberg & Thomas, 1971, pp. A71, Weber, 1971, p. 136).

8.0 Curriculum is an out-flow of the co-planning of teacher, child and peers and is different for each child (Weber, 1970. p. 170).

9.0 Assessment of pupil progress must be individual (Barth, 1972, pp. 37041; Walberg & Thomas, 1971, pp. A68-69).

Metatheoretical Base

The phenomena and events which are the focus of the conceptual system have been identified by the reality base. The predominant values, beliefs, and assumptions of proponents of the open classroom have been explicitly stated by the value base given in the previous section. Now, the metatheoretical base for the study will be characterized; that is; the type of theory envisaged and the appropriate manner of theorizing. Since the metatheoretical base has been examined in detail in Chapters I and II of this study only a concise summary will be given here.

1. The minimum aim for this study is to produce a a conceptual system which is defined as a framework designed to identify and reveal relationships among complex interrelated and interacting phenomena (Goodlad, 1966, p. 3).
2. The next appropriate type or level of theory indicated by the current status of theory development on the open classroom is conceptual theory, which is characterized by Snow (1973, pp. 82-86) and Boring (1963, pp. 210-225) as being a set of hypothetical

constructs, perhaps speculative in nature, in combination with known and defined concepts. The conceptual system represents an effort toward the development of conceptual theory.

3. This study focuses on the open classroom as a means to reach agreed ends. This class of theory is defined as praxiological by Maccia (1965, p. 4).
4. The conceptual system focuses on the natural grain and detail of the behaviour it is supposed to represent. When theory is developed directly from the empirical reality it is supposed to explain,it is is called grounded theory (Glaser & Strauss, 1967, pp. 1-3).
5. The conceptual system examines the facilitation of learning for the unique child. This type of theory is termed idiographic (Snow, 1973, p. 99; Zimiles, 1973) as opposed to nomothetic.
6. The foregoing characteristics of the type of theory envisaged as being appropriate for the open classroom indicates that the conceptual system be derived inductively from qualitative and quantitative data pertaining to the reality of the live open classroom.
7. The requirements of the foregoing theoretical base, bearing in mind the nature of the reality open classroom, were fashioned into a flexible procedure for theorizing. This guided the selection and analysis of appropriate

literature pertaining to the open classroom, and the development of a conceptual system (See Chapter II).

The Conceptual Model

Integrating Concepts

The foregoing body of this thesis has developed the ingredients of a conceptual system. The study commenced with the reality of the open classroom and moved through ana analysis of the literature, which suggested candidate concepts for the conceptual system. Guided by this analysis and the preliminary reality and value bases, abstract concepts which would integrate and explain the phenomena of the open classroom were identified. The conceptual system can now be assembled. This exercise will commence with the integrating concepts identified by the previous chapter and proceed towards the reality of the classroom in a deductive manner. The deductive approach is utilized to present the conceptual system forseveral reasons; firstly, it serves as a validation of the results of induction and irons out inconsistencies; seoondly, one of the intended functions of the conceptual system is to guide research by suggesting appropriate and fruitful hypotheses, which is a deductive function; and thirdly, the power and nature of the integrating concepts to explain and unify can only be illustrated by the process of deduction.

This section, therefore, will examine the three integrating concepts appropriated by the previous chapter - synergy, authenticity, and intention - in order to illustrate their explicative function, inter-relationships, and usefulness as a superstructure for the conceptual system.

Synergy - is defined as the optimal integration of that which was formerly differentiated (Hampden-Turner, 1970, p. 190).

Authenticity - is defined as being and becoming one's chosen self through autonomy and self-expression. Being authentic means valuing what you are doing (Moustakas, 1967, pp. 17-18).

Intention - is defined as what an individual chooses to do (Allport, 1963, p. 264).

Education was defined at the outset of this study as the development of individual and social meaning. As shown previously, the open-classroom approach to education attempts to integrate the individual and the environment (the environment includes peers, teachers, and other adults) to give individual and social meaning. Synergy, as the major integrating concept identified by this study, accounts for and unifies more of the varied and sometimes paradoxical activities of the open classroom than any other concept identified thus far. As noted in the previous chapter, it explains why:

1. The child is brought into direct contact with his environment.
2. The open-classroom approach involves a personal and subjective view of knowledge (Barth, 1972, pp. 63-66).
3. The curriculum is self-chosen (Belanger, 1969, p. 99; Long, 1973, p. 24) continuous (Dewey, 1963, Ch 3) and reflects the real world and environment.
4. Any discontinuity within the classroom, between classrooms within a school, and between home

and school is minimized (Weber, 1971, pp. 31-34, 77-81, 94-100). The reason that the above are strived for is that the various elements mentioned are brought into unity; that what was previously differentiated or separate is optimally integrated; that the whole produced is more than the sum of the parts, in terms of personal and social meaning. The main synergistic relationship that is strived for, however, is the relationship between teacher and child. It is characterized more often than not by the teacher and pupil jointly assuming decision-making functions in the classroom in complementary but different roles. They, together, fashion the child's classroom experiences within the framework of the child's choice of immediate goals and the teacher's goals for the child. There are, therefore, two sets of values and objectives operating but they are parallel and confluent if the teacher facilitates the child's own purposes with activities which also serve her broader objectives. The child, in his egocentricity, is developing personal or individual meaning, but, at the same time, it leads to social meaning. The teacher-child relationship, therefore, is not characterized by confrontation, imposition, or a win-lose competition to see whose purposes will be served, but a relationship which facilitates both the hopes of the child and society.

Subsumed, under the concept of synergy, is the concept of authenticity. This concept applies to the unique child, peers, teachers, and environment alike. They are to be real and genuine. The synergistic relationship among child, peers, and teacher requires self expression, choices, decisions, and independent, as well as

interdependent, thought and action. That is, this relationship requires authenticity. Authenticity, being oneself, does not mean anarchy. Being oneself means that part of oneself that is unique and different as well as being that part of oneself that holds in common with others. It includes that which is innate (curiosity, needs, maturation), that which is socially or culturally learned (wants, desires, customs), that which is individually learned, and that which is uniquely existential. Being authentic is linked intimately with the development of individual meaning, but this leads to social meaning if one is co-operating with others and facilitating the authentic behaviour of others.

The somewhat abstract concepts of synergy and authenticity lead to the more operational concept of intention. Intention is what the child chooses to do which gives personal meaning and makes the activity authentic. The intention that the child has elected, however, has inevitably been influenced by his peers, teacher, family and others - that gives it social meaning, which when optimally combined with individual meaning makes the activity synergistic. The successful implementation of intention integrates the self and the environment via activity and experience. Figure 14 illustrates the overall relationship that the foregoing paragraphs have explicated.

The aim of the open classroom has been stipulated to be the development of individual and social meaning, as ideologically characterized by Rathbone (1972, p. 527). This study was undertaken to examine the open classroom as a means to reach those ends; however,

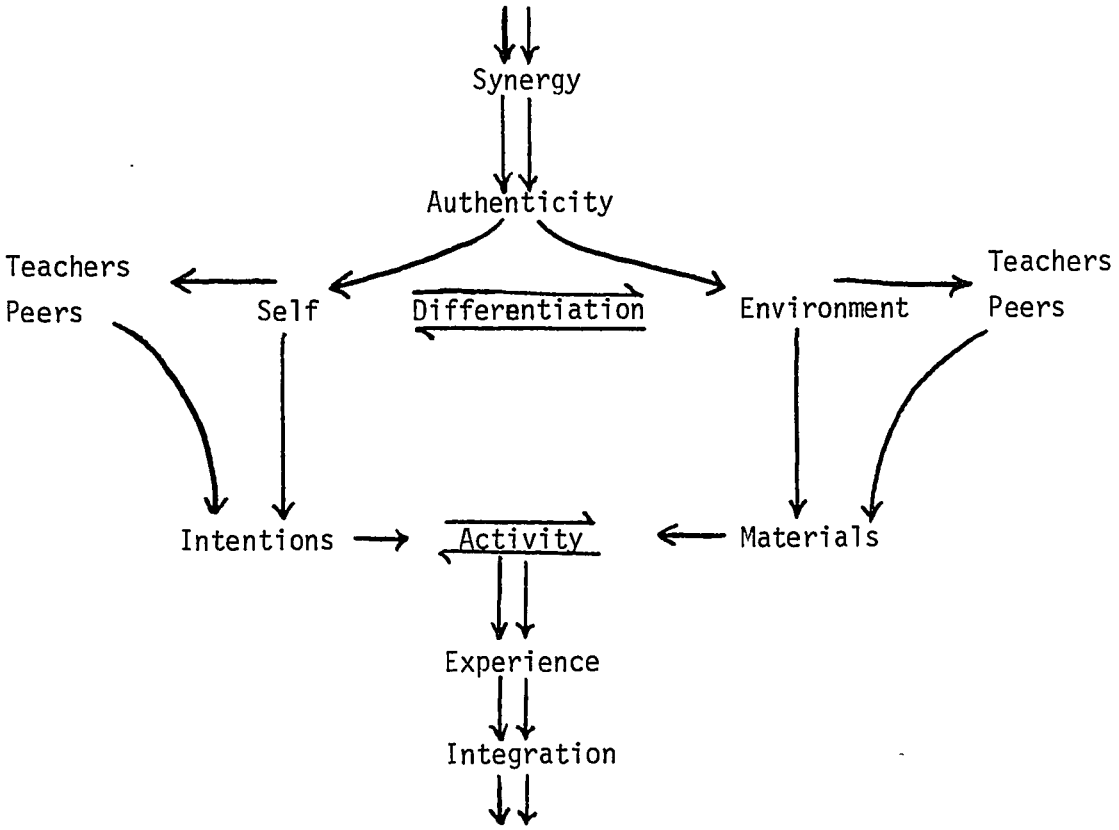

Figure 14: Diagram illustrating the inter-relationships of integrating concepts and subordinate concepts.

the relationships demonstrated between means of synergy and authenticity indicate that those concepts are ends in themselves. So there emerges another synergistic relationship, that of the unity of means and ends, since the best way to achieve synergy and authenticity is to be synergistic and authentic. Figure 15 illustrates this notion and the use of facilitation of intention as an operational means of being authentic, synergistic, and building meaning.

The Model Magnified

The previous section explained the superstructure of the conceptual system for the open classroom in terms of the integrating concepts of synergy, authenticity, and intention. This section will present the remainder of the conceptual system in the form of a magnified model. This model assumes that the superstructure of the conceptual system which has just been described is superimposed. It represents more of the operational detail of the system and is presented in Figure 16.

The model reflects the open classroom from the perspective of the individual child who works with peers and a teacher in implementing his own purposes with ever-increasing self-implementation.

The circular portion of the model represents the authentic self of the child; it highlights the interaction of cognitive schema, values, feelings, emotions, and the important process of making choices, judgements and decisions. The box to the left of the circular portion of the model represents a projection of the authentic self in terms of all characteristics (unique to the child

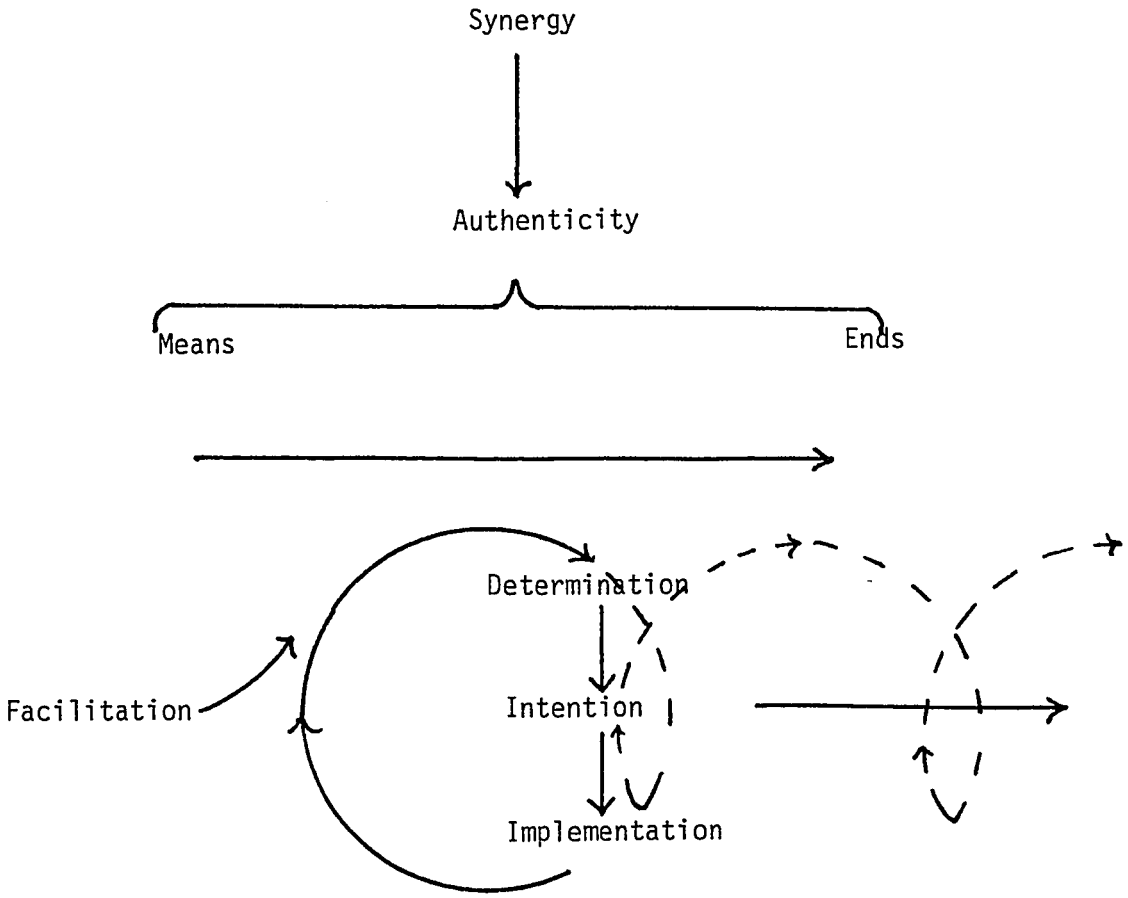

Figure 15: Representation of synergy and authenticity as unified means and ends utilizing the concepts of intention and facilitation.

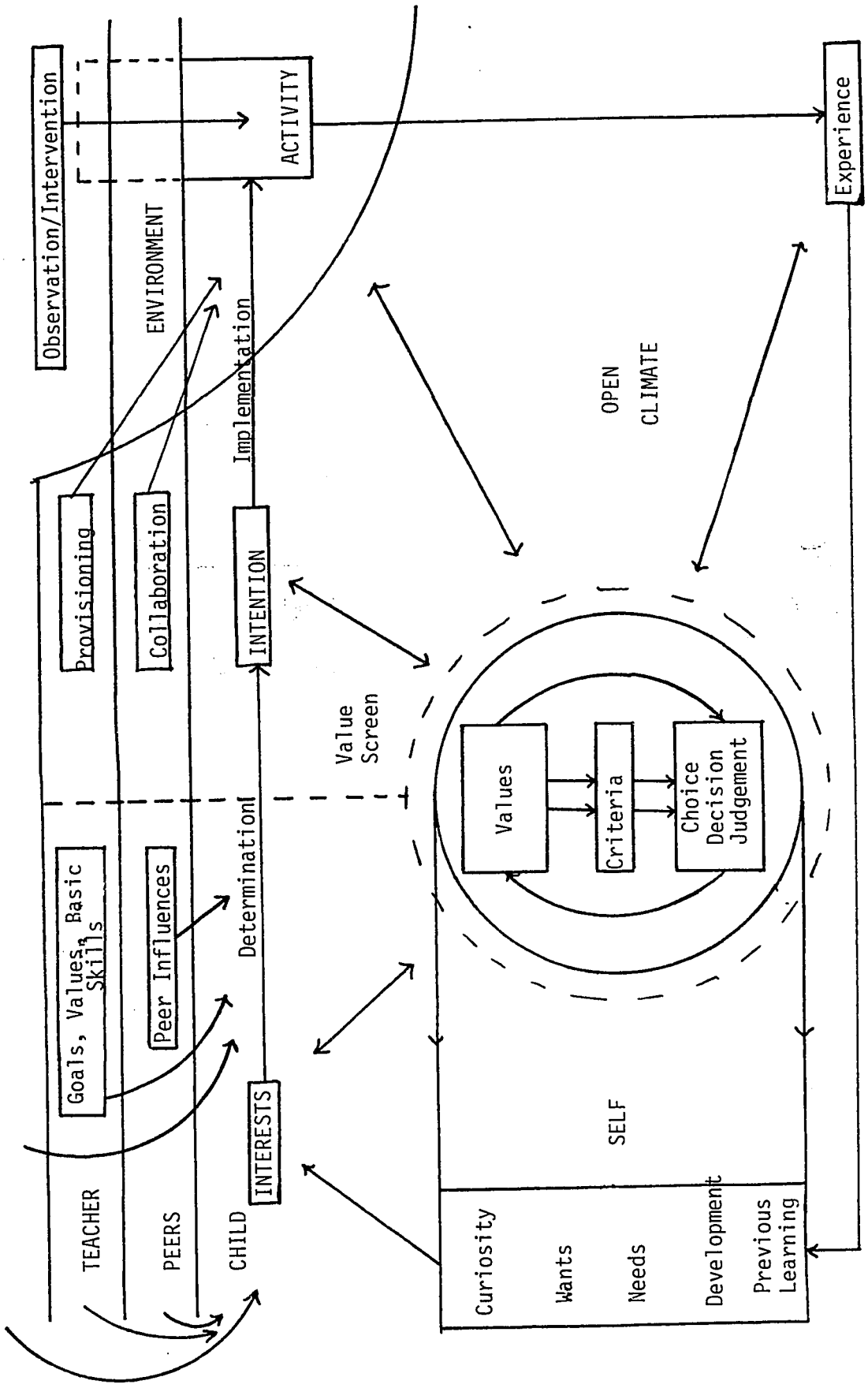

Figure 16: Model of a conceptual system for open education

as well as those the child holds in common with others) which predispose the child to engage certain aspects of the environment. Some examples are curiosity, needs, wants, development and previous learning. This projection of the authentic-self interacts with, influences, and is influenced by the environment, actions, feelings, and values of peers, family life, and the teacher. Out of this mēlange of determinants emerge the child's interests.

Interests are defined as predisposed intentions. They are portions of the environment towards which the child is predisposed to attend and engage. Cognitive arousal is more likely to occur within areas of interest than elsewhere. Within the open classroom these interests, which may be broad, vague, or quite specific, are subjected to the value screens of self, peers, and the teacher in order to determine intention. Ideally the child elects his own intention, even though the teacher suggests it, and if among several children enough congruence of objectives occurs then group work is possible. Through the teacher's provisioning, joint planning, and possibly through peer collaboration the child's intention is implemented in the form of activity.

Activity is defined as the child interacting with some concrete aspect of the environment. The quality of the activity in terms of outcomes may be judged or prejudged utilizing Dewey's (1963, Ch 3) criteria of interaction and continuity. Interaction refers to the degree, quantity,quality of transactions between self, others, and the material environment. Continuity refers to the degree to which a present activity maintains wholeness, integrity, and

authenticity of the learning gained from the experience of preceeding activities. It assesses the goodness of fit that this activity has with both previous personal knowledge and with previous portions of the environment with which the child has been involved. Maintaining continuity is a matter of being able to take the most appropriate piece of the puzzle of the environment which also is the most appropriate piece to fit to the assembling puzzle of personal knowledge.

Within activity is embedded the notion of engagement which is defined as the degree of involvement of the learner in a given activity. Dimensions of engagement can be visualized in terms of length (time), depth (quality, intensity), and breadth (richness of subactivities). The dominant determinants of engagement are therefore: the relative value placed on a specific interest and intention that gives rise to a specific activity, the degree to which a particular activity facilitates the implementation of an intention, and the degrees of continuity and interaction.

Since activity, as defined, necessarily requires the personal involvement of the child, it results in experience which may reinforce, extend, or modify the authentic self (cognitive schema, values, criteria) a portion of the environment being integrated within the self. Engagement will therefore be a major determinant in the quality and quantity of experience, therefore, learning, personal knowledge, and education. The reinforced or modified self influences and produces new intentions which continue the cycle.

The activity of the child, as described above, within the open classroom, requires respect, trust and genuineness for both teacher and child resulting in ethical interactions which act as a model for desirable behaviours. The atmosphere which facilitates these characteristics or interactions and in turn accrues from them is labelled open climate.

The final aspect of the model that should be made explicit is that the child is continuously reflecting, assessing, and making judgements using his own personal value system. This is labelled evaluation within the model. It may occur at any time in the cycle. Of particular importance is the evaluation of experience, since it is this which determines impact on the child's development of individual and personal meaning.

Summary

This chapter has presented a conceptual system for the open-classroom approach to education which has been derived from the analyses conducted in previous chapters of this thesis. The portion of reality which the system attempts to account for was stated initially. This reality base described the phenomena, subjects, and events which characterize the open classroom. This was followed by a set of related statements which denotes the value base of proponents of the open classroom. The type of theory and theorizing thought to be most appropriate and fruitful in terms of the nature of the reality and value bases were outlined next. The main portion of the chapter presented the conceptual system which

was derived using the foregoing substance and processes.

The major integrating concepts which account for and explain a major portion of the variety of events in the open classroom were presented in the form of an interrelated superstructure for the system. This was followed by a detailed conceptual network which could be deduced from the superstructure and which utilized more operational concepts. It remains for the subsequent and final chapter to discuss the findings of this thesis and their implications.

CHAPTER VI

FINDINGS AND IMPLICATIONS

Introduction

This chapter discusses the findings of the study and their implications. A summary of aims and procedures is followed by a presentation of major findings. A general assessment of the study is provided by a comparison of actual and intended outcomes. The findings are discussed in terms of implications for the study and practice of education in general and the open classroom in particular, with suggestions for further research and development.

Summary of the Study

Aims and Procedures

This study resulted from a concern for the lack of an explicit theoretical base for the open classroom. Despite the fact that the informal or open classroom approach has been utilized for many years, it is only recently that concerted efforts have been made to evaluate its usefulness. Unfortunately, these efforts have been hampered by the absence of an adequate theoretical base.

The questions, therefore, that this study sought to answer were:

1. Do elements of theory pertaining to the open classroom exist in the literature?
2. If so, what are these elements?
3. In what form do they exist?
4. Can these elements be synthesized and/or extended to form conceptual systems for the open classroom?

A conceptual system was defined as a framework designed to identify and reveal relationships among complex interrelated and interacting phenomena (Goodlad, 1966, p. 3). The intended functions of the conceptual system were: to describe the open-classroom approach to education, to identify its key concepts and their interrelationships, to provide a template for dissemination and implementation, to act as a framework for considering problems, to facilitate valid and appropriate research, evaluation and development, and finally to minimize misinterpretation and misapplication. While the development of a conceptual system was the main aim of the study, it was also hoped that the system would qualify as a conceptual theory.

For the purpose of this thesis, the goals of the open classroom as specified by Rathbone (1972, p. 50) were accepted as valid. It was not the purpose of the study, therefore, to speculate about the appropriateness or worthwhileness of those goals. Thus, the type of theorizing envisaged was to focus on the open classroom as a means to reach agreed ends. This class of theory according to Maccia (1965, p. 4) is called praxiological. In order that the conceptual system would reflect the phenomena it was supposed to represent, the type of theory

identified as being appropriate to develop was grounded theory (Glaser and Strauss, 1967). This was to be derived from the reality of the live open classroom utilizing an inductive procedure. Accordingly, an inductive procedure for theorizing was developed. It provided a flexible guide for the selection and analysis of eligible literature, and the development of the conceptual system. It also facilitates replication of this study.

The main portion of the study consisted of the implementation of the above procedure. It established a description of the phenomena and events which the conceptual system was to represent - the reality of the live open classroom. This was followed by the selection and analysis of literature pertaining to the historical roots, development, and operational frameworks of the open classroom. The concepts and hypothesized relationships which emerged from this analysis were combined to form tentative conceptual networks. This completed the exploratory phase of the study.

The integrative phase of the study was then implemented. Firstly, it established a value base for the open classroom, and secondly, searched for integrating concepts which would unite and explain concepts which emerged from the exploratory phase of the thesis. The value base consisted of the common set of beliefs, assumptions, and values held as being important to the ideology of the open classroom by its proponents. The value base pertained to the nature of the child, the child's way of learning, the view of knowledge, and facilitation of learning. This base, together with the reality base served as a guide in assessing concepts which emerged from the exploratory phase of the study and added in the identification of integrating concepts.

Three integrating concepts, intention, authenticity and synergy, were identified and used to account for the major themes, events, and subordinate concepts evident within the open classroom. Following the integrative phase, the last phase of the study gave formal statements of the reality and value bases of the open classroom. Subsequently, the integrating concepts were assembled into a superstructure for the conceptual system. This was then utilized to deduce the remainder of the conceptual network from subordinate concepts enunciated by the exploratory phase of the study.

This section has outlined a summary of the aims and procedures of this thesis. The findings of the study will be presented and discussed within the next subsection.

Findings

The findings of this study emerged from initial and subsequent phases of the procedures for theorizing and were cumulative in nature. The outcomes of the study will, therefore, be summarized as they accumulated in chapter five under the headings of reality base, value base, integrating concepts and the remainder of the conceptual system.

Reality Base The preliminary reality base in chapter three served to provide a comprehensive picture of the live open classroom. It provided one base for checking the appropriateness of concepts which were to emerge later in the study. Having completed the exploratory and integrative phases, a more concise reality base could be stated in the formal phase. It denotes the phenomena, subjects, and set of events which the conceptual system describes and explains (Beauchamp, 1975, p. 82). It provides the natural grain and detail (Nuthall, 1968, p. 31) of the open classroom and is the foundation of the inductive procedure

used to develop grounded theory (Glaser & Strauss, 1967).

The open classroom approach to education as a means to reach agreed ends was the focus of this study. The subject of this approach was the unique child, usually ranging from three to seven years old. The events to which the conceptual system referred are the transactions among the children, teacher and materials. These events occur mainly between the children and their environment within flexible learning groups, since children are the prime agent in their own learning (Belanger, 1969, p. 99; Weber, 1971, pp. 172, 183). The teacher, however, makes a high contribution to the classroom (Bussis & Chittenden, 1970, p. 15) via her selective provisioning of the environment, and the unobtrusive interventions she makes to facilitate learning. In its attempt to accurately represent reality, the reality base also served the important purpose of exposing misconceptions. It established that proponents of the open classroom do not practice the following beliefs: that children are well behaved all the time and do not need discipline; that the teacher provides materials then fades into a passive role; that neatness, accuracy, perseverance, and competence in the basic skills are inferior goals; that the open classroom is unstructured and only child-centered (Berlak, 1975; Bussis & Chittenden, 1970, pp. 15-25; Hassett & Weisberg, 1972, p. 32; Stodolsky, 1975, p. 113; Weber, 1971, pp. 109, 136).

Value Base When the reality of the live open classroom was examined via literature pertaining to its implicit ideology, it was possible to state an explicit value base of common beliefs and assumptions that proponents of the open classroom hold to be true. This value base provided an additional source for making decisions about the conceptual

system. It consisted of two main subsets of statements, those which pertained to the child alone and those which pertained to the child when involved with facilitative acts of instruction. A brief précis of the value base is included here. (Detailed references and sources of these statements are given in Chapter V).

Children exhibit innate curiosity and self-exploratory behaviour which results in learning and education. The combined characteristics of self exploratory behaviour and the child's stage of development make activity, play, and concrete manipulative experience fruitful for learning. Each child's learning and development goes through similar stages though each child does so in his own way, rate, and occasion, making each child unique and different. This uniqueness of self and self-development is manifested through a natural egocentrism which. via the child's activities, serves a broad array of needs, ranging from survival to the development of self-identity. Open educators believe there is a cyclic and positive relationship between self-concept and learning. The foregoing emphasis of self-development, therefore, requires that the child be able to make significance decisions and choices regarding activities in which he will engage.

Experience resulting from the above activities is personally internalized and integrated into cognitive structures, a child's knowledge is, therefore, regarded as personal and idiosyncratic, not fitting neatly into separate disciplines or sets of learning outcomes. The best course of knowledge, therefore, for the child is his own chosen experience.

As with all classrooms, the open classroom must assume that the deliberate facilitative acts of others can provide a better education than can the child alone. They believe, however, that the best way of achieving it is via interventions in concert with the self-exploratory

behaviour of the child. This is optimized by providing a rich material environment anddaa warm, trusting, and open climate within which each child is valued as a unique human being and treated with respect. If fear and threat are minimized, and the child sees the materials as having relevance for his own purposes, needs, and interests, it is likely that the child will initiate his own activity for his own purposes. Skilful provisioning and interventions, on the part of the teacher, including joint planning with the child, will increase the probability that there is adequate congruence of the child's and teacher's goals, resulting in a curriculum which generates both individual and social meaning.

Integrating Concepts and Conceptual Model Equipped with the concrete descriptions of the open classroom that the reality base provided, together with the value base as a further guide, a search for integrating concepts was conducted. These were intended to unite and account for the tentative conceptual network that emerged from the analysis of the history, development and operational frameworks of the open classroom.

Three major integrating concepts were identified which unified and explained the events within the open classroom. The need for a unifying concept at the operational level which would pinpoint the nub of the open-classroom approach was established. The concept of intention (Allport, 1963, p. 264; Dearden, 1968, p. 46) was illustrated as appropriately meeting this need at the operational level while remaining consistent with the ideology of the open classroom. Higher level concepts were identified which explained why intention and the accompanying subordinate events in the open classrom were invoked to

facilitate the development of individual and social meaning. The concept of authenticity (Halpin, 1966, p. 204; Maslow, 1968, pp. 9-16; Moustakas, 1967, pp. 17-18) was utilized to unite events and concepts pertaining to the strong theme of self-development evident within open classrooms. The concept of synergy (Hampden-Turner, 1970, pp. 187-195) was identified as a superordinate to authenticity. It was illustrated that synergy, that is, the optimal integration of parts into a better whole, accounted for a major portion of events in the open classroom including: continuity, wholeness, the emphasis of the real world, the relationship between the teacher, the child, and the environment.

The relationship between the teacher and the child was seen as particularly important since it represents the touchstone of the open classroom approach (Blackie, 1967, p. 4). Whereas, in education, this relationship may be characterized by conflicting goals, interests, and perhaps a power struggle, the open-classroom approach emphasizes a synergistic relationship. The teacher and child work together bringing the child's intention into confluence with the teacher's goals. This results in an integration of personal and social meaning.

Synergy was seen as subsuming both an authentic individual and an authentic environment. The final synergistic relationship noted was the unity of means ends within the open classroom, in that synergy and authenticity, as ends, were achieved by means of being synergistic and authentic.

The integrating concepts of synergy, authenticity, and intention were then utilized together with the reality and value bases to build the remainder of the conceptual system from concepts which emerged in the exploratory phase.

A model of the system reflected the open classroom from the perspective of the individual child who works with peers and a teacher in implementing his own purposes. The authentic self of the child, involving curiosity, needs, wants, development and previous learning, together with environmental influences, especially classroom resources, teacher, and peers, are presented as determinants of the child's interests. Interests are defined as predisposed intentions. From these interests, however vague or specific, the child with the aid of the teacher and peers, determines intention (Allport, 1963, p. 264; Dearden, 1968, p. 46) which emerged as the key operational concept for the open classroom. This intention was seen to be implemented as an activity within a flexible support structure provided by the teacher who, utilizing her knowledge of the child, would aim for maximum engagement of the child as judged by the criteria of continuity and interaction (Dewey, 1963, Ch 3). The experience resulting from this activity was thought to result in the development of self via individual and social meaning.

This section has presented a summary of the thesis, including aims, procedures, and major findings. The next task is to consider the quality of these outcomes.

Discussion of Findings

Assessment

It is necessary to discuss the findings of this study to consider whether they satisfy its aims and objectives. This section will, therefore, discuss the findings in terms of the original research questions and purpose, and give a preliminary assessment of the quality of the conceptual system.

Although at the outset of this thesis it was assumed that elements of theory pertaining to the open classroom existed in the literature, the initial question of the study addressed itself to the validity of this assumption. A review of the literature did reveal explicit elements of theory (Barth, 1970, 1972; Bussis & Chittenden, 1970; Rathbone, 1972; Walberg & Thomas, 1971) although they represented only the lower levels of theory according to Boring (1963, pp. 210-225) and Snow, (1973, pp. 82-86). The exploratory phase of the thesis did reveal concepts and relationships which were eventually included in the conceptual system. This attests to the fact that many elements of theory pertaining to the open classroom were implicit in the literature. The extensive analysis undertaken in the main body of the study also answered the second and third questions posed as part of the problem for this study. It identified the elements of theory and the form in which they existed. The major research question asked if these elements of theory could be synthesized and extended to form a conceptual system. This major question was answered with the aid of the integrating concepts identified previously.

The major questions of the study have been answered. An important consideration, however, is the quality of those answers. Certain efforts to indicate the quality of the conceptual system can be undertaken, but its real worth can only be demonstrated by its subsequent use in the research, development and practice of the open classroom.

The functions of the conceptual system were envisaged as to describe the open-classroom approach to education; to identify its key concepts and their interrelationships; to provide a template for its

dissemination and implementation; to act as a framework for considering problems of the open classroom; to facilitate valid research, evaluation and development; and to minimize misinterpretation.

The safeguards inherent in the procedures developed for this study attempted to ensure that the above functions were well served by the conceptual system. The emphasis on a systematic and cumulative examination of the literature utilized a comprehensive account of the reality of the open classroom and an explicit statement of the open-classroom ideology as a guide to the appropriateness of successive conceptual networks. The foregoing procedure gives justification to the claim that the conceptual system serves the function of validly describing the open classroom by identifying its key concepts and interrelationships. The conceptual system is more comprehensive and explicit than previous theoretical frameworks (Barth, 1970, 1972; Bussis & Chittenden, 1970; Rathbone, 1972; Walberg & Thomas, 1971). It should, therefore, better serve the function of dissemination, problem solving, research, evaluation and development. Further evidence of the usefulness and quality of the conceptual system will be implicit in the discussion of implications later in this chapter.

Another way to assess the quality of the conceptual system is to ascertain whether or not it reaches the level of conceptual theory. Two criteria are pertinent here: Firstly, does the conceptual system contain invented concepts, which were illustrated as indicative of theory in chapter II. Secondly, does the conceptual system match the characterization of conceptual theory given by Snow (1973, pp. 82-86).

He states a conceptual theory consists of a set of hypothesized constructs, perhaps speculative in nature in combination with known and defined concepts.

The presence of an invented concept in a set of related statements which explains a phenomenon was deemed to be an indicator that that set of statements is theory (Brunowksi, 1965, pp. 12,33; Homans, 1964, p. 812; Showalter, 1969; Stinchcombe, 1968, p. 3). In the same way that Kepler's Laws describe regularities in the motion of planets, so patterns of behaviour and interactions in the open classroom were noted. In a sense these patterns are both natural (the way the child is) and prescriptive (facilitation by the teacher). These patterns are described in the reality base; also they are represented in a more concise way in the value base. Kepler's Laws do not explain (Brunowski, 1965, p. 33) why the planets move in the way they do; similarly, the observed patterns of interaction in the open classroom do not explain why these patterns of behaviour are or should be the way they are. In the same way, however, that Newton invented the concept of gravitation to explain the motion of the planets, this thesis appropriated the concepts of synergy and authenticity to explain the patterns that emerged as fundamental to the open classroom - that of determining, implementing, and facilitating the child's intention. Synergy and authenticity explain why intention is or should be followed since it optimizes the integration of both the individual and the environment as they really are. Synergy accounts for the wholeness or authenticity of the curriculum, the school as a community, the home-school bond, and many other patterns of behaviour which attempt

to optimize benefits by integration. It is claimed, therefore, that the concepts of synergy and authenticity are invented concepts which account for, unify, and explain many varied events and patterns which occur within the open classroom. The conceptual system, as described in Chapter V, also fits the definition derived from Boring (1963, pp. 212-225 and Snow (1973, pp. 82-86).given at the outset of this thesis. This evidence suggests that the conceptual system may be considered a conceptual theory, but this judgement may be more properly left to others to make.

Implications

The previous section addressed itself to making a *prima facie* case for the validity of the findings of this thesis. It remains now to discuss the implications of these outcomes for further research and development. They will be discussed under the headings of implications for general education theory, theory development for the open classroom, empirical research, and the developmental and practice of the open-education approach.

General Theory In terms of educational theory in general, there are implications which arise from the nature of this study. This thesis provides approaches which may be fruitful for the study of education and theory development. The procedure developed for this study is an example of an explicit and systematic approach to theorizing. This paradigm has been tailored to suit the development of theory within a discipline whose modes of inquiry and theories are not well established. This necessitates, especially within the praxiological arena, an inductive approach (Glaser & Strauss, 1967). In any discipline at

this stage of evolution, especially when complicated by the added factor of being an applied discipline, the opportunity for creating confusion is great. This thesis has minimized the possibility of confusion in several ways.

Firstly, the attention given to the description of the phenomena which were to be the target of theorizing makes the object of the conceptual system or theory clear (Beauchamp, 1975, p. 82; Glaser & Strauss, 1967; Nuthall, 1968, p. 31). Secondly, the notion of metatheory directs attention to the fact that there are many types of theory in terms of substance, manner of theorizing, and structure. The metatheoretical approach should, therefore, be demonstrated as appropriate and should be explicitly delimited and specified (Snow, 1973, p. 79). Maccia's (1965, p. 4) classification of the substance of theory into formal, event, praxiological, and valuation theory is very useful and appropriate for applied disciplines. It facilitated delimitation of this thesis to the class of praxiological theory. Specification of the level of theory towards which this thesis was aimed was permitted by Snow's (1973, pp. 82-86) hierarchy derived from Boring's (1963, pp. 210-225) ideas on levels of theory. By attending to metatheory, then, scholars may avoid the futile task of theorizing about confusing mixtures of phenomena aimed towards unclear goals.

An emphasis on the metatheoretical question also permits an efforts to be made to develop educational theory directly from the set of events it is supposed to explain (Glaser & Strauss, 1967). The usual approach via the so-called foundation disciplines sometimes

offer artifical realities that do not correspond to the learner in the classroom. The former type of educational theory is seen as more likely to be true to its link with reality and functional within the classroom (Nuthall, 1968, p. 31).

The inclusion of a value base within the paradigm for theorizing is a recognition that with any applied discipline the prescriptive nature of theory, inevitably is based on a set of agreed values. It also acted as a screen which ensured that aspects of knowledge from the foundation disciplines were interpreted and defined in ways consistent with the open classroom (Petrie, 1976). This maintained the empirical integrity and ideological coherence of the conceptual system.

Prior to the above considerations, the researcher accepted Hosford's (1973, Ch 1) advice regarding setting up a matrix of definitions and relationships of the macroconstructs of education such as teaching, learning, instruction and curriculum in order that this theoretical endeavour could be viewed within a larger context. The parallel development of these constructs within one ideological framework is then permitted. This is more likely to facilitate the building of a body of knowledge within education (Hilliard, 1971, p. 41) than would the study of constructs in isolation from each other.

A final aspect of the implications of this thesis for educational theory in general regards the individual learner. Much lip-service has been paid to individualization of learning within education but without much true practical implementation or coherent theoretical background. Most educational practice and theory remains derived from

and for groups of individuals. The dominant statistical paradigm in educational research has generalized across groups of individuals, hence theories which have been induced have had the same flavour. There is, therefore, a great need for idiographic theories (Snow, 1873, p. 99; Zimiles, 1973) which emphasize the facilitation of learning for unique individuals. This thesis deliberately set out to create a conceptual system of an idiographic nature.

This subsection has illustrated some of the implications that this study may have for educational theory in general. Further theory development which is specifically aimed at the open classroom will be considered next.

The Open Classroom This thesis suggests several ways in which theory pertaining to the open classroom may be developed. These include: the assessment of this conceptual system, improving and expanding its detail, developing subtheory and improving the level of theory.

Beauchamp (1975, p. 82); Bruner (1966, p. 40); Gordon (1968, pp. 16-23) and Hosford (1973) among others have developed criteria which pertain to theory in education. A most immediate research effort necessary within the field of education would be to develop a comprehensive set of criteria for theory in education. One task for which it could be utilized is to assess this conceptual system to determine its strengths, weaknesses, and utility for the open-classroom approach to education.

One of the functions of this conceptual system is to serve as a general framework which will guide more detailed theoretical efforts.

Some suggestions are as follows:

1. The conceptual system focuses on the child in its initial form, now, however, more attention can be given to the deduction of the detailed teacher role, including how the work of Bussis and Chittenden (1970) and Walberg (1971) may or may not be incorporated.
2. The notion of determination and/or creation of intention needs clarification in order that practical procedures become explicit.
3. A sub-system which is fundamental to the framework is the co-planning and joint decision making of teacher and child. This feature of the conceptual system would be better illustrated by the derivation of practical examples.
4. The notion of assessing orobbtaining optimal confluence or congruence of pupil and teacher objectives seems essential to develop further if facilitation of learning is to be worthwhile.
5. The concept of engagement offers potential as an important variable for studying inputs and outcomes in the classroom.

A third type of theory development involves the parallel building of subtheory within the areas of learning, instruction, curriculum and other macroconstructs which are consistent with each other and the ideology of the open classroom.

A final suggestion which would benefit much of the practical and developmental effort in the field of education would be to examine the applicability of this approach to education beyond the early childhood grades. One way to achieve this would be through a theoretical route which examines how the basic concepts inherent in this conceptual system can be applied within the differing developmental and personal characteristics of older learners, including how they should be manifested in the classroom.

In summary, this section has considered the implications of the study for further development of theory pertaining to the open classroom. The conceptual system and the above examples of its further development may give rise to well-founded variables, hypotheses, predictions and appropriate research, which will be discussed in the next subsection.

Research

Apart from a few studies (Bennett, 1975, Ch 2; Gardner, 1966; Haddon & Lytton, 1968) empirical research on the open classroom is a recently burgeoning phenomenon. Taken together these studies have been inconclusive (Bennett, 1975, p. 29) perhaps resulting in spurious consensus (Stones, 1973, p. 18), since, they mostly have utilized crude research designs in which the independent variable is some vague scale of openness. This assumes the open-classroom approach to be a unidimensional phenomenon. On the basis of the conceptual system developed herein, this is an oversimplification, and efforts such as these maybe quite futile, bearing in mind the possibility of confounding effects. Furthermore, the split which divides open

from closed may be arbitrary, depending on the diversity and range of the sample more than anything else. This may result in the hypothetical optimum treatment being on different sides of the design in different studies.

The absence or meagre presence of theory for these efforts has given rise to hazy variables, inappropriate research paradigms, designs, and dependent measures (Travers, 1971). Little attempt has been made to design longitudinal studies which are more appropriate than single data gathering efforts (Bennett, 1975, p. 29). The conceptual system developed by this study has implications for empirical research. The multidimensional nature of the open-classroom is clearly illustrated, so that empirical research projects should be multivariate both for independent as well as dependent variables. This is especially the case if a synergistic effect of several aspects of the open classroom on certain outcomes is being investigated. The crude designs of open-versus-closed classrooms, which served an initial purpose, could now be modified in light of the key concepts identified and defined by this study. The conceptual system provides criteria for enunciating and judging what problems, questions and hypotheses are appropriate.

Another important consideration is the age of research subjects. Research projects should include the young child for whose developmental and individual characteristics the open classroom has been developed. They should not, therefore, focus exclusively on older elementary-school children simply because they can provide data on paper-and-pencil tests.

The individual nature of the open-classroom approach, as embedded within the idiographic character of the conceptual system, indicates that many potential hypotheses would require research paradigms which emphasize the observation and collection of data on individual children. Naturalistic or anthropological approaches seem, therefore, to be more appropriate.

A requirement of research designs for studies in the open classroom or any classroom environment is that they be longitudinal (Bennett, 1975, p. 29). A further consideration for each study is the appropriate time span of each study; many factors may influence this. The customary period within the few longitudinal studies that have been conducted has been one year. At the commencement of a new approach, however, the change may be traumatic for the learner, especially an approach such as the open classroom. Furthermore, the treatment needs to reach its optimum level and a stable state, followed by time for the effects of the treatment to be transferred into behaviour. This indicates that periods of a duration longer than one year should be considered.

This subsection has considered the implications of the conceptual system developed by this study for empirical research. Besides suggesting studies which serve to evaluate the open-classroom approach and test the conceptual system, the content of this study may be used to assess previous, present, and future research.

Practice It is hoped that the conceptual system has implications which are immediately evident for practice. This researcher sees implications in the area of misconceptions of classroom practice,

development and dissemination of the open-classroom approach to education. The study has served to explicate several commonly held misconceptions concerning the open classroom.

One contentious concern is discipline in the classroom. The argument is often made that the open classroom allows much behaviour which is disruptive to learning. This, however, according to Weber (1971, p. 136) is not the case.

> It is note that there are no discipline problems but that these become less disruptive to everyone else's work.... Part of the answer is that with children working in ones and twos on different things instead of as a unit, the impact of aggression is diluted.... Other observers also report the striking fact of few discipline problems.

The open classroom therefore does not assume that all children are well behaved, but instead provides an environment and climate where desirable behaviour, is more likely to occur and undesirable behaviour, if it should occur, is least disruptive.

It is also been easy for the open classroom to be interpreted as laissez-faire where the teacher just provides masses of materials with which the children do what they want. As Weber (1971, p. 109) stated,however, "direction takes the form of implementing the child's purposes." The facilitating structure for this is carefully worked out, with the teacher contribution being quite heavy (Bussis & Chittenden, 1970, pp. 20-23). Classroom management routines are quite clear as Hassett and Weisberg (1972, p. 32) have pointed out.

> An open classroom must be a well organized, well disciplined unit. The housekeeping must be meticulous, and the children must

> participate in the organizing, the disciplining, and the housekeeping.

The traditional virtues of neatness, accuracy, perserverence, and care are not neglected, in fact the pupil is given time to practice these. For example, if a pupil in a open classroom rewrites some work three times, it would not be as a punishment; it would be done in order to produce a better play, radio show, or short story.

Stodolsky (1975, p. 113) captures the root of most misconceptions, when she expresses the opinion that it is easy to get the impression that the best open classroom is one where the teacher intervenes the least as children follow their own interests. According to Berlak (1975), however, open educators do not believe that a child will always pursue the most educationally fruitful path on his own. Ideally, the teacher intervenes optimally for each child and has an important responsibility for standards of work, conduct, for developing, directing, and extending interests, and for imposing requirements when necessary.

The further development of the practice of the open-classroom approach is aided by the conceptual system. Several examples made clear by this study include: the creation and determination of intention, ensuring congruence and confluence of objectives, determination of degree of flexibility and structure necessary for the successful implementation of a particular intent, and the importance of observation in providng a knowledge base for a variety of interventions. The conceptual system also provides enough scope for deduction of many other practical manifestations of the guiding concepts of synergy and authenticity.

The dissemination of classroom practice which professes to be of the open classroom variety may be facilitated somewhat by the conceptual system. Besides serving as a checking template and guide to actions, it may aid in the development of the understanding, philosophy, and attitudes necessary for practice.

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APPENDIX

ABSTRACT OF: The Development of a Conceptual System for the Open Classroom

THE DEVELOPMENT OF A CONCEPTUAL SYSTEM FOR THE OPEN CLASSROOM[1]

This study focused on the lack of an emplicit theoretical base for the open-classroom approach to education. It attempted to contribute toward theory in this area by the development of a conceptual system which would: describe the open-classroom approach to education, identify its key concepts and their interrelationships, provide a template for dissemination and implementation, facilitate valid research, evaluation, and development, and minimize misinterpretation and misapplication.

For the purpose of this thesis, the goals of the open classroom were assumed to be worthwhile ends, so that the conceptual system was concerned with representing the open-classroom approach as a means for reaching these ends.

An inductive procedure for theorizing was developed, which provided a flexible guide to the selection and analysis of literature for the purpose of building the conceptual system. Firstly, a comprehensive description of the phenomena and events the conceptual system was to represent was established. Literature pertaining to the historical roots, development, and operational frameworks of the open classroom was then analyzed. The concepts and hypothesized relationships which emerged from this analysis were combined to form tentative conceptual networks. The ideology of open education was made explicit in the form of a set of statements representing their beliefs, assumptions, and values. This value base, together with the reality base described earlier, were then

[1]Richard L. Butt. A Doctoral Thesis presented to the School of Graduate Studies of the University of Ottawa, Ontario, September, 1977, pp. 199.

utilized to assess the conceptual networks and to aid in the identification of integrating concepts which would unite and explain the events of the open classroom.

Three integrating concepts: intention, authenticity, and synergy were identified and used to account for the major themes, events and subordinate concepts evident within the open classroom.

An operational model for the open classroom which focused on the unique child was based on interactions among the child, the environment and teacher. The model shows how the self development of the child is facilitated by the determination and implementation of the child's intention in confluence with teacher goals. The importance of the child's interests, activity, and resulting experience emerge strongly, as does the teacher's role in provisioning, observing, and making appropriate interventions to facilitate learning.