A DOCUMENTARY ANALYSIS OF THE BRITISH COLUMBIA
SCHOOL HEALTH PROGRAMME (SECONDARY)

by

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ABSTRACT

The school health programme is an area within the school in which two distinctly different communities of teachers and health professionals are represented. It is a construct of unique and complex dimensions that has not been adequately addressed in the educational or health professional literature.

This study claims that an investigation of selected teacher and health professional curricula documents has revealed an extensive school health programme that is officially prescribed at the secondary level. The first area is the presence of a hidden curriculum of health in the subjects of science, physical education, guidance and an explicit programme of health for school health professionals. The second area of research interest concerns the existence of diverse understandings about the school health programme that appear in the official curricula documents of the Ministries of Education and Health analyzed in this study. These understandings appear in the documents as teacher and health professional constructions of the social reality of the school health programme.

Theoretically informed content analysis is used in this study to analyze the curricula documents. Specific theories from the sociology of knowledge have been utilized in constructing the framework from which the research questions and categories of analysis were derived.

The analysis indicates that there is a poorly defined, loosely constituted plan of health teaching in science, physical education and guidance. The majority of health education objectives, beliefs and outcomes are hidden and interspersed
within this curricula of the teaching community. In contrast, the curricula plan for the health professional is explicit and concisely delineated. Whereas the curricula of both communities display a wide variety of health related work and teaching and a diversity of understandings about health, the overall impression is that the school health programme at the secondary level in the province of British Columbia is an entity that is both unique and complex.
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This thesis is dedicated to my husband, Jason.
CHAPTER I

STATEMENT OF THE PROBLEM

1.1 Introduction

School health is a unique area of learning within the world of the school. There are few programmes in schools in which such diverse communities as the educator and the health professional are expected to work together in what appears to be a most complex milieu. Additionally, it is an area that is loosely structured and inadequately defined within the literature. School health can be described as an unusual phenomenon of work and learning within the school. It is based on the premise that this phenomenon represents an eclectic collection of curricula in which facets of medicine, public health, the social sciences, as well as education are represented (Kreuter et al, 1983). The boundaries of such a programme are poorly defined and the goals of the communities involved may not always be clearly delineated (Balog, 1981; Auman, 1982, 1983). Indeed within the Province of British Columbia, in which this study was undertaken, there is no formal curricula for the overall School Health Programme that can be compared to the officially prescribed curricula of other subject areas, e.g. Science or Mathematics. Therefore, in order to study the nature and implications of such a programme, it has been necessary to find the various areas of learning and work in schools in which school health education appears to exist within the curricula documents of the school. For this particular
programme the guidelines, policies, and work activities are under the direction of both the Ministry of Education and the Ministry of Health. Legislative guidelines for the school health programme, including the work of health professionals in school settings, are directed by the mandate of the School Act of British Columbia (Chapter 319, Sections 106 – 120). Various subject areas in which the teaching of health education occurs are mandated under the guidelines of the School Act of British Columbia (Chapter 319, Section 18). In both instances the School Act provides more generic than specific guidelines for the school health programme. Therefore, a major part of the problem has been the necessity to find, record, and categorize the nature of the school health programme as it appears to exist within the formally prescribed curricula documents relating to the school health programme of both the Ministry of Education and the Ministry of Health. A content analysis of selected documents established the formally prescribed existence of a programme of school health that is contained in the curricula documents of Science, Physical Education, and Guidance and the curricula plans of the school health professionals.

The second phase of research was based on the problem that the literature pertaining to school health programmes has not given sufficient attention to the complexities of this programme in which two distinctly differentiated communities of professionals coexist. The major groups that have been involved with prescribed aspects of school health programmes are teachers and health professionals. In addition to this situation presenting a problem of the social construction of an area of
teaching and learning within the school, the problem is also educational. The educational dilemma here is the question of what should the school do. Specifically, what tasks and responsibilities does society expect schools to be involved in within this area? In particular, different groups have perceived the concept of school health education from different perspectives.

The primary means of explicating the differences in documentary understandings and intentions of the two communities involved with this programme was to analyze the formally prescribed curricula data from the communities by means of content analysis. Specifically, the research task looked at the objectives, goals, rationales, and beliefs of these groups of teachers and health professionals constructed within the documents that were related to the school health programme; the ways by which each curriculum guidebook defined and apportioned roles that were construed as health related; and the means selected as being appropriate for the dissemination of this programme within the school.

The literature about school health does not appear to address adequately the questions that are raised in this study. The literature generally fails to delineate the complex nuances of school health education programmes. This lack of attending to the problems of complexity is most evident in the fact that there is little, if any, literature related to:

1) The existence of a hidden health education curriculum that can be found within facets of the overall curricula of many teaching disciplines at the elementary and secondary levels.
This void is especially notable in current Canadian school health research. For example, this study found many instances of health related teaching guidelines within the overall curricula of secondary science, physical education, and guidance that are not reflected in the literature. The fact that these curriculum guides disclose areas of health teaching within the overall format of the subject areas' formally prescribed guidelines provides a problematic situation that is both complex and worthy of further investigation.

2) The epistemic diversity that is represented by teachers and health professionals who interact as professional communities within the overall context of the school health programme. The term epistemic, described in detail on page 8, refers in this study to professional groups which by nature of their training and social experience have arrived at different perspectives about such issues as school health programmes. For example, the curricula data of these two groups indicates the existence of different frames of reference. These frames of reference include such aspects as taken-for-granted assumptions and specialized language that each group uses to look at and understand this phenomena of the school health programme. From a sociological perspective, it will be argued that the very fact that such diverse epistemic communities do exist and interact in this setting of the school health programme appears to create a situation of complexity that requires explication.
This study is designed to investigate the problematic complexity of the school health programme; to explore the nature of the documentary existence of this programme and to focus on the different orientations of the teachers and health professionals that are presented in their documents. The focus of this study was to find, record, and analyze the existence of such a programme. Three research questions guide this investigation of the documentary data:

1) What do these documents display as being health related objectives, goals, rationales, and beliefs of teachers and health professionals?

2) Who is referenced in the documents as responsible for health related teaching and work activity? Additionally, what are the implicit or explicit role definitions of those delegated as being responsible?

3) How do the documents describe the means by which the school health programme should reach the intended recipient in the school? In particular, what kinds of health related teaching and work activities are specified?

The sociology of knowledge theory that provides a framework for this study was utilized in the formulation of these three research questions. Specifically, the theory espoused by Holzner and Marx (1979) concerning institutionalized positions is reflected in Category I; their theory of institutionalized roles is contained in Category II; and Category III concerns their views on institutionalized processes. An extended discussion of the theory/research question/category analysis of this thesis is contained in Chapter III.
An underlying research intent of this study is to further define the documentary understandings of these communities as it relates to the concept of health. Research questions 1 and 3 have also been analyzed by means of the Health Dimension Classification scheme derived from health concept research in Australia (Brumby, Garrard, and Auman, 1985). This Australian research inquiry is discussed in detail in Chapters III and IV.

The methodology of theoretically informed content analysis is used in this thesis. This methodology is based on selected theories from the sociology of knowledge. These theories form the framework from which the research questions and the categories of analysis are derived and provide a contextual basis for the making of inferences. This methodology is described briefly in Chapter II and extensively in Chapter III.

Drawing upon the sociological theories of knowledge development, application, and dissemination, this study is designed to extend the body of knowledge that exists about the learning and work in the world of the school, particularly in the area of school health programmes.

1.2 Subproblems

1.2.1 The First Subproblem

The initial phase of dealing with the problem was to first find instances within the secondary subjects of science, physical education, and guidance in which health issues or health concepts were described in the documents as being taught or acted upon. These instances included such diverse activities
as the teaching of a lesson about the effect of drugs on the nervous system within the context of a science class, or the provision of immunization injections by school health professionals. Having found areas of work and teaching in which the school health programme was officially sanctioned, the researcher then focused on the following questions.

The first question concerned what the documents signify as being health related objectives, goals, rationales, and beliefs of the teacher and professional groups. These particular understandings about health are defined through the official documents of both communities. The second question focused on the need to determine who the documents stipulate as being responsible for the health related teaching and work activities within these programmes. Additionally, there was the question of what are the role definitions of those delegated as being responsible. The third question centred on the means by which this school health programme is documentarily described as reaching the intended recipient. Specifically, by what kinds of teaching or work activities did this occur? A further question asked of these data is how the display of documentary understandings related to the concept of health can be categorized into various subdivisions of content patterns by means of the Health Dimension Classification Scheme.

1.2.2 The Second Subproblem

The second subproblem was to utilize the different perceptions attributed to these two communities that appear within the formal documents in order to identify major
discrepancies that might exist between teachers and health professionals. This process involved a documentary mapping of the differences displayed as characteristics of these two communities. In this manner the differences between the communities that exist in these data in terms of their objectives, goals, rationales, beliefs, role delineations, and the means for providing the programme to students could be analyzed.

1.2.3 The Third Subproblem

The third subproblem was to examine the comparisons between these communities of teachers and health professionals by means of sociological theories which provide a framework for the study of knowledge development, application, and dissemination. The educational problem that concerned the research focus as a whole was related to the unusual and complex nature of this particular programme that is unique within the world of the school. The study was constructed with an on-going objective of building upon and extending the work of sociology of knowledge theorists such as Holzner and Marx (1979). In more general terms, the overall goal was to extend the body of knowledge that pertains to the learning and work of the school, with specific emphasis on the secondary school health education programmes.

1.3 Definitions

Epistemic communities is the term used by Holzner and Marx (1979) that describes communities in which the knowledge of that community is understood as being a special kind of
knowledge. This special knowledge is acknowledged by the members of their epistemic community and others as being specific, as having definitive boundaries of knowledge production and application, and belonging to the epistemic group. In these communities there is a development and elaboration of this special knowledge that requires the establishment of an autonomous social space. The epistemic communities of this thesis are teachers and health professionals. These communities can be further subdivided into science, physical education and guidance teachers, community health nurses and physicians, etc.

School health programmes or school health education programmes refer to the overall context of organized teaching and service activities involving students, teachers, and health professionals in which formally prescribed health concerns and health topics are addressed. The programme in this instance is understood as encompassing all teaching and work activities in which health concepts or health issues are taught or acted upon.

Educators are those individuals employed by the Ministry of Education under the auspices of the Public School Act of British Columbia. These educators teach in either elementary or secondary school settings.

Health Professionals are those individuals employed by the Ministry of Health, and in the particular situation of school health personnel, who also work under the auspices of the Public School Act of British Columbia. Health professionals carry out various work and educational activities in both
elementary and secondary school settings.

**Content analysis** is a methodological tool that is used to objectively and systematically identify specific characteristics of documents and other forms of communication. In this thesis the contents analyzed are the officially prescribed documents of educators and health professionals.

**Documentary or content patterns** are a schematic device whereby the socially constructed patterns of documented beliefs and understandings of the teacher and health professional communities are displayed in the curricula documents, either in tabular or descriptive form.

**Curriculum** refers to the set of school experiences through which the students are educated; the learning activities and experiences selected for the purpose of achieving educational experiences and the designs of social groups for the educational experiences of children in school (Holt, 1980, Bent and Unruh, 1969, and Lawton, 1973). The curriculum documents used as data for this study are described below.

1.4 **Delimitations**

This study was limited to required areas of study as they appear within the B.C. Secondary School curricula and additional selected Ministry of Education documents that contain references to the school health programme. It included representative documents from the Ministry of Health and officially prescribed materials from the City of Vancouver's school health programme procedure manual. The secondary school curricula was limited to
Science, Guidance, and Physical Education curriculum guides as prescribed by the provincial government of British Columbia and the Guide to the Core Curriculum.

1.5 Documentary Data Base
The following documents are the educator data base:


The following documents are the health professional data base:


The above documents are representative of formally prescribed documents that are utilized by teachers and health professionals and are understood to be officially sanctioned guidelines for the variety of teaching and work activities that occur in the overall school health programmes within British
Columbia. The subject areas of physical education, science, and guidance have been chosen as areas of analysis because they represent curricula that are taught to a majority of students within the secondary schools. They are also representative of subject areas in which health teaching is more likely to appear. Other health related subject areas such as home economics have not been included in the sampling because they do not represent curricula areas for the majority of the student population. The health professional documents were chosen with the following criteria in mind. The Public Health Nursing document (B.C.M.H., 1982) is the official guideline for British Columbia in which general policies and guidelines for the registered nurses' involvement in school health programmes are delineated. Discussions with the Ministry of Health indicate that the second document, the School Health Procedures Manual from the City of Vancouver Health Department, is representative of the comprehensive guideline manuals used throughout the province in which policies, guidelines and specific directions on the day to day operation of school health programmes appears.

1.6 The Curricula as an Information Base

The curriculum data of this study have been used as information sources in which various facets of the school health programme have been found to exist. These data, as the officially prescribed guidelines to be used by teachers and health professionals, display information that is central to the major research intents that were pursued in this study. The first research intent was the interest in exploring the
possibility that both hidden and explicit school health programmes were contained in the documents. The second intent was to illustrate by means of sociological interpretation the complex and varied displays of the beliefs and understandings that each document assigns to its respective teacher or health professional group.

These kinds of data play an important role in the everyday, shared understandings of institutions such as schools. Smith (1974) has observed that our understandings of contemporary society are mediated to us through documents of various kinds and that knowledge in this sense is socially accomplished. She further observes that most factual documents are not made to be detached from the specific organizational contexts of interpretation. The perspective taken in this study is that these documents, having been developed and specified for use by their respective teacher and health professional groups, can be understood from within the framework of their specific community. An argument is made in this thesis that the curriculum documents of this study provide rich and varied understandings about the documented existence of a school health programme that heretofore has not been adequately explored.

This study is not concerned with the implementation of these curricula or the individual interpretations of the teachers and health professionals who make use of these documents. It focuses instead on these documents as representing the officially mandated curricula guidelines of the Ministries of Education and Health. In this context the documents portray not only the official views about the
curricula to be addressed by these two groups but also the official interpretation of the diverse understandings that are portrayed within the teacher and health professional documents.

1.7 Internal and External Validity

The educator data base is made up of formally prescribed and published curriculum guides and selected official ministry documents from the British Columbia Ministry of Education. The health professional data base is comprised of officially prescribed and published guidelines and procedures regarding school health programmes in British Columbia, originating from both the British Columbia Ministry of Health and the Vancouver Health Department.

1.8 Content Validity

Content validity of the data is sound since only officially prescribed and published ministry documents that are utilized by the B.C. school system as representing guidelines for curricula were analysed in this study. Health professional data meets similar criteria in that only officially prescribed and published documents pertaining to school health were utilized. Care was taken to ascertain that the documents are in fact the product of the separate ministries of the government written in conjunction with selected members of their respective teacher or health professional groups.
1.9 Generalizability and Utility

It is the belief of the researcher that this study is generalizable to the extent that other researchers could use the modes of analysis and research findings as a basis for further investigation into other areas of educational work and learning within the school. Furthermore, it should be possible to replicate this type of research within the settings of institutions other than educational environments in which separate professional communities are to be studied. Very few articles appear in the literature in which the differences between the communities of the educator and the health professional have been explored. The school health programme as it exists within the world of the school presents a phenomenon of learning and work activities that is both unique and complex. The basis for this unusual phenomenon appears to be the existence of a problematic situation of epistemic communities with different beliefs, intentions, and understandings about school health programmes. It is a situation of work and learning in which complex belief systems about the concept of health are displayed. The milieu of the programme is one in which confused boundaries of role and responsibility are found. The setting of the problem also signifies an area of educational interest in which a mixture of activities and processes are disseminated to the student. This type of study should be applicable not only to school settings but also to other institutions such as hospitals. Theoretically, it can be argued that this type of research can be pursued in any setting where two or more differentiated epistemic communities work in a
situation of social interaction that is bounded by a programme or a curricula.

This particular study has been designed to build upon the existing body of knowledge about school health programmes and should provide other researchers with findings that can be utilized in similar situations.
CHAPTER II

REVIEW OF THE LITERATURE

2.1 Introduction

The body of literature that forms the background for the setting of this study is divided into two sections:

a) School Health and Health Concept Literature;
b) Sociology of Knowledge Literature.

In the areas of school health and health concept literature, representative articles have been selected for the following purposes. Firstly, there is a complexity and ambiguity present in much of the literature that serves as a basis for constructing one of the central arguments of this thesis. This argument centres around the fact that there are few, if any, attempts in the literature to explore the amorphous, multifaceted nature of the overall school health programme. Furthermore, there are numerous articles about the development, implementation and evaluation of such programmes, but few that address the complex nature of these programmes in which diverse professional groups work together.

Secondly, in addition to the complex situation of divergent groups, there is another warrant for justifying a study of this nature. This reasoning is based on the fact that the literature contains few articles in which the existence of such a programme within the various subject areas of teaching has been investigated. As further background to the review of the literature it should be pointed out that the U.S. school health
literature generally references this area of teaching and learning in schools as being treated as a separate content course by a health education specialist. In some instances health education is taught by a physical education or science teacher who is designated as responsible for this content, either as a separate course or subsumed within a particular subject.

Yager (1981) is representative of a relatively small group of science educators who have written about teaching health within various subject areas. He has raised various questions about the role of the science teacher as health educator and the parallel concern of whether health education should be taught within subject areas or as a separate curriculum. As an American educator he generally places his concerns within the framework of that system. Garrard (In Press) is an example of another science educator who writes about the teaching of health within the context of science education in schools. As an Australian, she observes that health concepts appear to be embedded in much of their science curricula and that science teachers take on this role as they work within the framework of the curricula.

In the Canadian context there are few studies that have addressed the overall situation of health teaching as occurring in the various subject areas of the school. However, there have been some attempts by the provinces to develop health teaching within the curricula of the elementary school. Many generalist elementary teachers in this province and elsewhere in Canada appear to have incorporated health concepts into their teaching
agenda. In a number of instances this health curriculum appears to have been locally developed with an uneven distribution of implementation. In Vancouver, for example, the Guide for Life curriculum resource guide (Vancouver School Board, 1982b) provides extensive guidelines for incorporating health teaching into the elementary classroom. This health education curriculum, while available for optional use by the elementary teachers, is currently in little use within the classroom. With the exception of the Active Health curriculum, also researched and developed for optional use by the Vancouver Secondary Physical Education Departments (Vancouver School Board, 1982a), there is no comparable curriculum guide.

Given the general lack of research about this complex area of teaching and learning within the school, particularly at the secondary level, there appears to be a need for such studies. At present there are no studies available within this province that have specifically addressed the complex embedding of health teaching within the various teaching disciplines of the elementary and secondary school system. This situation exists despite the claims that have been made by Canadian health education researchers such as Mutter (1982, 1985), the task force on the status of health education in schools (B.C.M.A., 1984), and Johnson (1986) that studies have been conducted and the overall school health programme found to be deficient. The B.C.M.A. (1984) report, in particular, outlines in detail a recommendation for the creation of a separate health education curriculum but fails to show the overall scope and sequence of health teaching possibilities that currently exists within
various curricula of the school.

In response to the paucity of information provided in the current literature about the nature of the overall school health programme, and specifically to the Canadian studies pertaining to the status of the programme in this province, a claim is made in this thesis that we do not have an adequate picture of the situation. As will be discussed further in this study, the findings of the Mutter (1982, 1985) studies and the B.C.M.A. (1984) research are not in agreement with the findings of this thesis. A major difference between these Canadian researchers reported in the literature and the research contained in this study appears to centre around the fact that different methodologies have been used; different questions have been asked of data sources and different answers have been elicited. This divergency of findings will be discussed further in Chapter V.

Thirdly, there is a basic conceptual research area that appears to be intertwined within the setting of the school health issue. This area concerns health concept research. In order to clearly define the problematic nature of the school health programme it appears to be useful to also present a brief discussion of selected examples of health concept research. This rationale is based on the claim, in this study, that health itself is a complex concept and representative of knowledge that is socially constructed. The diverse, multifaceted dimensions of health beliefs and understandings are intricately intertwined within the underlying puzzle of the study itself. Therefore, selected examples the health concept literature are also
included in this literature review.

The second area of literature addresses the theoretical framework of this thesis. The theory that guides and anchors the research inquiry of the study is drawn from the sociology of knowledge. The basic premise of this theory is the belief that knowledge is socially constructed. Knowledge, in the instance of this research study, refers to the overall school health programme. Additional research focus is placed on the documentary inquiry into the existence of two epistemic groups which, in this study, are the teachers and the health professionals. The objectives, goals, rationales, and beliefs related to a definition of health (Category I), the role intentions (Category II), and the teaching/work activities (Category III), that are documentarily constructed as relevant to the school health programme have been studied by means of sociological theory. The writings of Holzner and Marx (1979), Schultz (1962, 1967), and Smith (1974) are of particular importance to the theoretical framework of this study.

2.2 School Health Literature

The school health literature is subdivided into four categories:

a) literature defining health education and schools;
b) health concept literature;
c) traditional interpretations of the school health programme;
d) literature related to complexity in the area under study.
2.2.1 Health Education and Schools

The literature contains definitional interpretations of health education that have direct application to the school setting. However, there appears to be no consensus within the literature of health education as to what would constitute a clear definition of its use within the school. For example, Green et al (1980) defined health education within the school setting as involving a designated combination of methods for facilitating voluntary adaptations of behavior that is conducive to health. A more complex definition of health education within the school was provided by Kreuter et al (1983). These researchers described school health education as being an unusual phenomena of work and learning within the setting of the school. Their definition was based on the premise that this particular phenomena represents a somewhat eclectic collection of curricula in which facets of medicine, public health, social sciences and education are represented. Pollack and Hamburg (1985) appear to reinforce the Kreuter et al definition in their description of health education in schools as being an applied science that is basic to a general education of children and youth. Their description includes a belief that it is a body of knowledge representing a synthesis of facts, principles and concepts, drawn from the biological, behavioral, sociological and health sciences. This body of knowledge is described as being interpreted in terms of human needs, values, and potential.
2.2.2 Health Concept Literature

Of equal importance to the definitional interpretations of the school health programme that exist in the literature is the parallel body of health concept literature. Selected writings from this field are provided in this thesis for the purpose of emphasizing the complexities of the problematic situation that is being studied. Within this area there are several researchers who have attempted to provide form and substance to our understandings about the concept of health. Eberst (1984) proposed a multidimensional model of health that included the physical, emotional-mental, social and spiritual categories of health. He contended that school health professionals, in particular, have not been able to agree on one or a combination of philosophical approaches. Eberst stated that the conceptual nature of health has historically been a complex phenomenon and one that has not been well understood. Furthermore, he argued that school health professionals have neglected the theoretical issues involved in the ways by which we conceptualize health.

Gerhard Schaefer's research (1980, 1984) represents an earlier attempt to investigate health concepts of school age children by word association. When the research of Schaeffer (1980) in Germany is compared with a similar word association study from the Philippines (Villavicenzio, 1981) the complexity of establishing cultural meanings for the word "health" within and between cultures is evident. These two studies revealed both the complexity of cultural interpretations of health and health relationships, particularly in the students' concepts of illness and medicine (Brumby, Garrard, and Auman, 1985).
Another cross-cultural study that attempted to look at the concept of health, as evidenced in several countries including Canada, Germany, the Philippines, Jordan, Japan, Barbados, and Kenya, was the International Union of Biological Sciences/UNESCO study (Schaefer et al, 1984). This study of health concepts suggested that students in these countries have different frameworks for conceptualizing health. The Canadian and German students primarily described health in physiological or body function terminology, with the German data revealing a strong emphasis on the students' associating health with the biomedical model of disease, prevention, and treatment. The Philippine students, on the other hand, had more positive associations with health as a wellness concept and displayed a belief in the spiritual aspect of health.

Recent Australian health concept research originated by Brumby and Garrard (1982) and extended in the joint research work of Brumby, Garrard and Auman (1985) investigated student perceptions of the concept of health. A content analysis of these students' understandings of the meaning of health were displayed under the major conceptual areas of the physical, mental, and social domains of health. They found that both secondary and tertiary students described health primarily in physical terms. The Australian study is of particular importance to this research because a Health Dimension Classification scheme adapted from that study has been used as part of the analysis of data in this thesis.

Perry (1983) provided a further dimension to the conceptual problem of understanding health. She stated that the notions of
health and health promotion each serve to connote a range of meanings that have different personal, social and political significance. Health was described as encompassing at least four interrelated domains: physical health (physical and physiological functioning); psychological health (a subjective sense of well-being); social health (social effectiveness and role fulfillment) and personal health (the realization of individual potential).

In addition to the health concept literature there is a parallel body of research that has focused on the perceived need to test the health knowledge that is displayed by school aged children. The Canada Health Knowledge Survey: 9, 12 and 15 Year Olds (King, 1983) is representative of this research. This comprehensive study of health knowledge tested 29,000 Canadian students in Grades 4, 7, and 10. It found that Grade 10 students in British Columbia displayed inadequate health knowledge in the areas of alcohol, communicable diseases, non-communicable diseases, drugs (including smoking), human sexuality and fitness. The authors commented that

...the results reflect a number of factors; the main factor, of course, is the extent of health teaching by parents, community and the media.

(King, 1983, page 3)

This study is included as an example of studies that have attempted to measure the extent of health knowledge displayed by school aged children.

We appear to have some information about adequate or inadequate levels of health knowledge attained by some school aged children, as exemplified by such comprehensive testing.
Additionally, there are studies that have focused on the variety of conceptual understandings that exist about health. However, what we appear to be lacking, particularly within the Canadian context, is a base line of knowledge about the fundamental nature of the school health programme, both from a curricular perspective as well as the perspective of a social construction of this programme.

In summary, the health concept literature has been useful to the research of this thesis. The concept of health, as the literature illustrates, is a complex entity. It is a concept that changes with the interpretation of the individual and the group. The social construction of the reality of the school health programme, which can be observed in the documents of this study, is fundamentally tied to the different interpretations of health that appear in these data.

2.2.3 Traditional Interpretation of School Health Programmes

The body of literature that has traditionally represented school health programme research has given little notice to the complex nature of the programme. Instead, the focus has been primarily on studies about the development, implementation and evaluation of school health programmes. Many of these studies have involved detailed research work. Representative of these studies are the writings of Yager, Kabarec and Atwood (1985), Pigg (1983), the Canadian Education Association survey (1978), and the School Health Education Study (U.S.D.H.W., 1967). Yager et al (1985) described in detail an extensive study of school health education in Iowa in which a programme for designing and
assessing comprehensive school health education programmes were researched. Pigg (1983) contributed a comprehensive evaluative summary of school health education in five states of the U.S. A major recommendation of this study was that all health instruction at the secondary level be taught by a "certified health specialist". The School Health Education Study of 1967 involved a massive federal evaluation of health instruction throughout the U.S., with detailed information provided in this report on the development and implementation of these programmes.

The Canadian Education Association report provided an extensive survey of the status of Canadian school health education which included the following recommendations:

a) If health education is considered to be a separate subject, we should ensure time and status.

b) If health education is integrated with other subjects, we should ensure that the coverage of health topics is actively pursued and not merely assumed.

(C.E.A., 1978, page 56)

Although comprehensive in its discussion of health teaching within the curricula as defined in its survey questions, many of the complexities of the programme were not investigated. Specifically, this study did not display the depth and breadth of health education teaching possibilities that are formally prescribed within the curricula of the secondary schools. It also failed to address the differences in beliefs and understandings that exist between different communities of the school.
While focusing on the traditional ways of presenting school health research the literature generally appears to be deficient in the area of studies of complexity. Eberst (1984) has raised concerns about this void within the literature. He has suggested that school health professionals put too much emphasis on the implementation phase at the expense of neglecting the more primary and foundational issue of the theoretical construction of the concept of health.

The lack of discussion as to complexity of the programme can be observed in the more contemporary surveys and various research reports regarding the status of the school health programme in the context of the Canadian school system. The Canada wide survey of the Canadian school aged health programmes (Mutter, 1982) made only a passing reference to the possible problems of complexity. In this regard the author advocated the employment of health education coordinators for the purpose of facilitating better coordination between the various Ministries of Education and Ministries of Health. A follow-up survey by Mutter (1985) offered no new insights into the complexity of this programme. Additionally, this later study on the status of Canada's school health programmes acknowledged health education as existing in the subject areas of physical education and guidance, but ignored its existence in the science curriculum.

A second contemporary report on the status of health education in the Province of British Columbia presents further evidence of the imprecise image of the school health programme that is found in the literature. This study is the Report of the Presidential Task Force on Health Education in B.C. Schools
(British Columbia Medical Association, 1984). It presented findings of a study of health education practices in British Columbia public schools that was conducted by a special task force of the B.C. Medical Association. Highlights from the report's summary included:

...secondary schools in this province do not demonstrate sound nutritional practices.

Physical fitness and physical education programs are adequately distributed in the schools throughout the province, but the level of individual participation is unknown.

The major problem of adolescent substance abuse is also severely under-represented in school curricula, particularly at the secondary level. Again at the secondary school level discussions on pregnancy control and sexual behaviour are actively avoided in some schools.

The education system's reluctance to speak out on these issues is most discouraging.

(B.C.M.A., 1984, page 19)

A major recommendation from this study was that a mandatory health curriculum for all students in pre-school through grade 12 be developed and implemented in all British Columbia schools.

The methodology for this study involved the use of a questionnaire that was sent to all public schools in British Columbia in which questions such as: what health education subjects (accident prevention, nutrition, etc.) are covered in your curriculum. Specific information relating to the number of minutes allotted, for example, to daily nutrition and fitness education was elicited. Key informants of this study were school principles or other designates. Teachers in areas such as science, guidance, and physical education do not appear as respondents. Additionally, there is no evidence in this study
to indicate an interest in finding the extensive hidden curriculum of health teaching within subject areas that have been found to exist in this study. There are similarities between this B.C.M.A. report and the Mutter reports (1982, 1985). In both instances the role of the science teacher as health educator was omitted from the findings. Additionally, other secondary areas of health teaching such as home economics and consumer education were not adequately explored for further evidence of health teaching. Both the B.C.M.A. report and the Mutter reports fail to reveal the diverse programme of school health that have been found to exist within the documents studied in this thesis.

A recent report from the Western Canada Health Education Interchange and Annual Health and Physical Education Conference of May, 1986 (section on B.C. by Johnson, 1986) presented a picture of school health education that, while brief and synoptic in its reporting, portrayed findings both similar and dissimilar to those found in this study. Valerie Johnson, as author of the B.C. section of this report, stated that at present health education appears to lack a consistent or comprehensive format within the public schools of British Columbia. She characterized this state of health education as being "sporadic, fragmented and idiosyncratic". Commenting on the Secondary Guidance Curriculum guidelines for teaching she observed that although there was a considerable amount of description of topics and sequential development provided in this document, it lacked directions for implementation. Much of what Johnson found at the secondary level, in terms of the lack
of clear directives and uncoordinated nature of the programme, is in agreement with the findings of this study.

However, there are some discrepancies that appear when the findings of the Johnson report are compared with the findings of this thesis. For example, the Johnson report, while acknowledging the role of the physical education and guidance teachers as being involved in school health programmes, ignored the role of the science teacher in health teaching. In addition, the extensive hidden curricula of the teaching subject areas surveyed in this thesis do not appear in this report. Furthermore, this report does little to shed light on the complex situation of teachers and health professionals who are both involved in this programme. Finally, the section of this report entitled "Future Directions" raises questions that are not adequately answered. For example, B.C. Ministry of Education officials are reported in this document to have recognized the need for a complete review of health education in B.C. schools, followed by development and implementation of a comprehensive program targeted for elementary and secondary schools

(Johnson, 1986 page 13)

The methodology for this "complete review" is not specified, nor are we told who is to be involved in this activity. As the B.C.M.A. study illustrates, it is possible to ask questions and receive answers that may not reflect the complexities of such a programme. An additional unanswered question that is raised by the Johnson report is the reference to

...development and implementation of a comprehensive program targeted for the elementary and secondary schools.

(Johnson, 1986, page 13)
If this statement refers to the possible creation of a separate curriculum for the teaching of health education in schools, it would then appear that there is a similarity between the Johnson and the B.C.M.A. reports. In summary, the Johnson report provides yet another view of the B.C. school health programme that serves to point out the different kinds of perceptions that can occur when researchers focus their attention on this complex area of the work and teaching of the school.

The last report in this series of Canadian focused studies is the Matters report of 1977, a report commissioned by the B.C. Ministry of Health. In this report on the status of school health in B.C., the author failed to mention any contact during the writing of his research with the classroom teachers and their role in health teaching. In contrast to the previous studies, the emphasis was on the school health programme as the domain of the public health nurse and other health professionals under the direction of the Ministry of Health as authorized in the School Act of British Columbia. Given the perspective of this report the reader would be led to conclude that health education is a non-event within the classroom teaching and work activity of the various teaching disciplines represented in the school.

A larger issue appears to surround the Mutter (1982, 1985), B.C.M.A. (1984), Matters (1977), and Johnson (1986) studies of the health education programme within British Columbia public schools. This issue concerns the fact that none of these studies appears to have addressed in a comprehensive manner the complexities and problematic setting of this area of work and
teaching in the school. These studies, while following the methodology of descriptive studies, have failed to uncover the complex and extensive embedding of health teaching that exists in major subject areas of the officially prescribed curricula. Additionally, they have ignored the unique situation of the presence of the different communities of teachers and health professionals who together socially construct this programme of school health within the school. As a result, a literature has been created that displays certain facets of the school health education programme while ignoring others. These particular studies have been included for the purpose of further highlighting the unique situation of this programme in the school that is both difficult to define and understand as well as representative of an entity that requires further elucidation.

2.2.4 Literature Indicating Complexity

Within the body of literature that is related to school health programmes there are some examples of research in which the complexity and problematic nature of this area has been suggested as being an important phenomenon for study. Yager (1981), Doster (1985) and Garrard (In Press) are representative of researchers who have written about the existence of health education within subject areas and some of the complexity of this curricular embedding. Yager (1981) in discussing the problematic situation of health teaching within the curriculum of science touched on the nature of complexity that is represented when these subject areas are combined. Yager also
observed that it appeared that more health education was taught in subjects other than science and suggested that the science education community should reflect upon this situation in terms of its own goals and objectives. He predicted that future trends in science teaching in the classroom would centre around a concern for human values with a heightened awareness of the subjective issues that surround science teaching. Yager was later quoted by Doster (1985) as expressing concern that science might better fulfill its mandated role by not attempting to subsume the role of health educator. Doster expanded further on the complexity of health teaching in subject areas such as science by contending that teachers faced a dilemma in this area. The teachers were portrayed as having to often choose between extending their curricula to subsume personal and social health with attendant teaching about attitudes and values aimed at health behaviour instead of focusing on the more traditional views of their subject such as science. The question of who should teach health and where it belonged in the curricula was raised as an unresolved situation within the school.

Garrard (In Press) cited the area of science as a subject in which many health education topics already existed. She observed that science teachers were involved in the teaching of health through the medium of incorporating health related topics in general science and biology and in some instances through the teaching of health education as a separate subject. Garrard further stated that the time had arrived for the sharing of expertise to occur between science education and health education. She made the point that in science education there
appeared to be a perceived need to make science more personally and socially relevant as well as issue based. In health education the problem concerned where to include this subject within the already crowded curricula. The answer, she suggested, may lie in mutually beneficial interactions between the two. Rohwer (1986) also addressed the difficulties faced by researchers in defining the precise nature of the school health programme. Some of the problems requiring solutions were: the lack of agreement in many school programmes as to what the content of health education should be, the lack of coordination of such programmes, and insufficient efforts at organizing these programmes relative to agreed upon goals, philosophies and course of study.

Hislop (1986) observed that the school health programme had been poorly defined and inadequately studied. She described health education as an area of the school that seemed to lack direction as to what it was and where it should be going. Expressing views similar to those of Balog (1981), she described school health education as a discipline that had been unable to clearly define its boundaries. This concern about the imprecise nature of boundaries appears to surface in several of the studies about school health in which the focus has been directed to the need to explore the complexity of the situation. Balog (1981) observed that the boundaries of school health programmes are amorphic and poorly defined. He further contended that the complexity of the phenomena was directly related to the fact that health as a concept is a human construct that is structured by means of the process of social construction. Auman (1982,
1983) also observed that school health boundaries, because they are so poorly defined, tend to impede our ability to understand where health teaching is occurring and who is doing this teaching.

This present body of literature about school health programmes is useful in illustrating the need for future research within the area. Generally, there appears to have been more questions raised than answered; more problems alluded to than solutions offered.

2.3 Sociological Theory

2.3.1 Introduction

In addressing the particular research problem of this thesis that is educationally situated, the researcher selected sociological theory that appeared to be well suited to the problem. These selected and focused theoretical viewpoints have been chosen to serve as methodological tools in assisting with an explication of the findings and as a framework for the theoretically informed content analysis used in this study.

The theory used is drawn from the general area of the sociology of knowledge. The specific theoretical constructs from within this field of inquiry are those of Holzner and Marx (1979), Schutz (1962, 1967), and Smith (1974). These writers are theorists within the sociology of knowledge field. A principle belief of these theorists is that knowledge is socially constructed, a term that refers to the belief that all knowledge is a socially defined reality which individuals and
groups construct in various ways. Within this thesis the argument that will underlie all discourse is that the two communities concerned with health education, the educational and the health professional, represent diverse ways of understanding. Therefore, they have developed and operationalized different social constructs of the school health education programme.

2.3.2 Theory of Holzner and Marx

Holzner and Marx (1979) cited work on the socially constructed nature of the reality of everyday life as being a systematic extension and continuation of insights from within the central tradition of sociology. They referred to the works of Schutz (1962, 1967), Berger and Luckman (1966), and Holzner (1968, 1972) as being a major framework for their own theoretical extensions within the area of knowledge construction and knowledge application. These authors provide a theoretical framework against which assumptions about the everyday world can be examined. In their writings in Knowledge Application: the Knowledge System in Society, Holzner and Marx (1979) observed that the objectives of doing an analysis of the social construction of reality is both a modest as well as an empirical process. The objective is the determination and analysis of the lawful process that human actors use for the purpose of determining what is real for them and how they form knowledge from such experiences. The problem, as they visualized it, is to seek to determine the social context in which knowledge is formed, maintained, changed, distributed, and utilized. Holzner
(1968) was careful to clearly outline within his conceptual framework a sociological definition of knowledge that was found to be useful to this thesis. He described knowledge as a communicable mapping of some aspect of an experienced reality by the observer who conveys this reality in symbolic terms.

Holzner and Marx (1979) further observed that since knowledge must be symbolically represented and communicated this also means that it must be structured in terms of a particular symbol system that is linked to the observer's stance and experience. Knowledge understood in this manner is the centre and focal point of the reality construction processes. The views of these theorists are particularly useful in their descriptions of the frames of reference by which different groups orient themselves and in so doing "see" the world. They suggested that our concept of knowledge in its relationship to the observer emphasizes the necessity to specify the observer's position and his point of view. Frame of reference was defined as being a structure made up of taken-for-granted assumptions, preferential usage of symbol systems and analytical devices with which the observer pursues his inquiry. The frame of reference defines the relationship of the observer to that which he knows and represents. Frames of reference are utilized in orienting ourselves to specific objects, in assisting with the conceptualization of what problems are and how the problems are constituted as well as determining possible or permissable solutions.

Of equal importance are the writings of Holzner and Marx concerning epistemic communities. Epistemic communities are
defined as:

....knowledge oriented work communities in which cultural standards and social arrangements interpenetrate around a primary commitment to epistemic criteria in knowledge production and application.

(Holzner and Marx, 1979, page 108)

Science was cited as being an example of an epistemic community. They further suggested that any special way of knowing, in which development and elaboration requires the establishment of an autonomous social space, will foster the creation of an epistemic community. Power was described as being an integral part of the epistemic community because it is a key facet of all social interaction. Holzner and Marx further observed that:

Since epistemic criteria define not only the nature of work within the community, but also the terms of its legitimation through application, the quality of models for knowledge production and knowledge application or use becomes a determinant and constraint for both the internal workings of the community and transactions across its boundary to public or clients. The experiential base of an epistemic community's reference frame may well be a major point differentiating epistemic communities.

(Holzner and Marx, 1979, page 109)

2.3.3 Theory of Schutz

The work of Schutz (1962, 1967) was described by Holzner and Marx (1979) as being central to their own research. Schutz, in his writings, outlined a way of looking at common-sense, taken-for-granted constructs about knowledge that are particularly applicable to the research problem addressed in this study. The common sense world or everyday world of Schutz is the locus of social activity. Within this situation we experience relationships with one another, attempting to come to terms with each other as well as with ourselves. Because we
generally take for granted this on-going construction, we do not fully apprehend or appreciate this aspect of our daily lives. Schutz observed that each individual continually interprets what he encounters in the world from the perspective of his particular interests, motives, aspirations, and ideological commitments. He observed that our biographical, accumulated understandings as individuals have shaped the ways by which we interpret the everyday world around us.

Schutz also theorized about the social distribution of knowledge. Knowledge was described as being socially distributed throughout society with uneven patterns of distribution. Schutz credited each individual with having certain areas of expertise. The individual structuring of knowledge comes from a system of prevailing relevances and is different for each individual. We may be expert in the knowledge of some fields, but only marginally acquainted with knowledge in others. In the instance of the educational and health professional communities there are obvious lines of demarcation between their fields of expert knowledge and acquaintance knowledge.

Schutz further observed that in our daily lives we construct what we perceive as being the Other's field of acquaintance, of the scope and texture of his knowledge. By this process we assume that others are guided by particular structures that can be expressed by sets of constant motives leading to particular patterns of action. In Schutz's theory of knowledge development and distribution the individual and the groups to which he belongs are forever engaged in a process of
knowledge weaving in which certain strands appear. This process of knowledge construction or knowledge making is a continual process for the individual as well as for the group to which he belongs. In Schutz's terms the threads for the process are selected from our everyday experience with the world around us.

2.3.4 Theory of Smith

The concluding author to be reviewed, from the field of the sociology of knowledge theorists, is Dorothy Smith. Smith's 1974 article, *The Social Construction of Documentary Reality*, provides a way of illuminating and interpreting documentary data that is especially useful to this study. Smith argued that our understanding of contemporary society is very much mediated to us by the use of various kinds of documents. She observed that:

> Factual statements in documentary form, whether as news, data, information, the like, stand in for an actuality which is not directly accessible. Socially organized practices of reporting and recording work upon what actually happens or has happened to create a reality in documentary form ....

*(Smith, 1974, page 265)*

Smith's writings appear to be congruent with the knowledge application theories of Holzner and Marx (1979), and the everyday experience grounding of interpretive understandings outlined by Schutz (1962, 1967). In commenting specifically about the genesis of documentary reality from within organizational structures Smith observed that contained in the context of the formal organization there is the process whereby factual records, or documents, are made as a continuous end product of the enterprise. She stated that this process depends upon and takes for granted a background knowledge of the way
things get done; how what is observed is constituted as observed within the practice and recognition of the members of that organizational community. The linguistic format of the message within the document was commented upon by Smith:

In general the terminology depends upon and takes in implicitly properties of organization which it does not explicate. These properties are an essential context to the uses of terminology and an essential resource in how it makes sense.

(Smith, 1974, page 265)

Using a Marxian framework she made the analogy that the relationship we have to others within society is in a sense mediated by the rule of social organizations. Knowledge in this sense is ideological because the social organization preserves the concepts and the descriptive means that represent the world as it is for those who rule it rather than for those who are ruled. For the purpose of the school health education phenomena being studied in this thesis, Smith's summarization could be restated as follows. The knowledge represented within the concept of school health education is in fact ideological because the social organizations of both the educators and school health professionals preserve their own concepts and the descriptive means whereby this phenomena is represented. Furthermore, these two diverse communities that claim ownership to the area of school health education as reflected in these documents appear to have constructed a domain of knowledge in which there are dualistic claims to knowledge production and knowledge ownership.

The literature related to the research of this thesis can be summarized as follows. School health literature generally
informs the reader of the development, implementation and evaluation of these programmes, but does not adequately address the underlying complexities of the situation. Health concept literature conveys much of the complexity of the concept of health but does not focus on the complexity of the professional communities which make up the school health programme. The body of literature referred to as the sociology of knowledge provides a theoretical basis from which the complex nuances of this unique school programme can be examined. Overall the literature serves to anchor the study within a contextual framework and to provide a basis for the construction of further insights into the problem researched.
CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

The research methodology chosen for the documentary analysis in this research is content analysis. Content analysis is particularly useful in educational research where a curriculum analysis is the central focus (Borg and Gall, 1983). Carney (1972) refers to content analysis as being most suitable for studies in which an aspect of social reality is pursued. Holsti (1969) advocates its use in studies that compare messages from two or more different sources, where the intent is to relate theoretical differences between these communications. The particular form of analysis chosen for this study is theoretically informed content analysis. Theoretically informed content analysis is always tied to the theory that underlies the research (Carney, 1972). In this study the theory is based on the Sociology of Knowledge theorists whose writings form the framework of this thesis (Schutz, 1962, 1967; Holzner and Marx, 1979; and Smith, 1974). Chapter III contains a detailed discussion of the process of content analysis as it is used in this research and its overall grounding to the underlying theory of this thesis.

3.1.1 Data Base

To develop the data base of this research study, an initial decision was made concerning selection and delimitation. The
data base for the teacher documents was found within the formally prescribed and published curriculum guides in the areas of Secondary Physical Education Curriculum and Resource Guide (B.C.M.E., 1980), Junior-Secondary Science Curriculum and Resource Book (B.C.M.E., 1983), Secondary School Curriculum Guide - Guidance (B.C.M.E., 1971), and Goal M from Guide to the Core Curriculum (B.C.M.E., 1977). These subject areas of specific curricula were chosen as being representative of courses in which a majority of secondary students were enrolled. The educator data also represent curriculum documents in which a discussion of the subject area as related to the overall concept of the school health education program is likely to occur.

The second corpus of data consists of two officially prescribed and published documents that are related to school health programmes. These health professional documents were selected as being the documentary equivalent to the teacher data. The first document is Public Health Nursing Program for School Age Children (B.C.M.H., 1982). This document outlines overall goals, objectives, and program guidelines. The second document is entitled School Health Program Procedures Manual (Marshall, 1982). This manual is the formally prescribed and published procedure guide used by the Metropolitan Health Unit, City of Vancouver, in which objectives, roles, and daily work procedures of school health programmes are outlined. Discussions with Ministry of Health officials indicate that it reflects the central policy and guidelines throughout the province.

It is important to point out that while there are different
years attached to these documents, the documents were contemporary, in-use, officially prescribed guidebooks at the time that this study began. The year attached to the document indicates the year of last revision.

An overall interest guiding the selection of these documents was the intent of the analyst to investigate both explicit as well as implicit documentary orientations about school health from representative data of teachers and health professional communities. Implicit documents in this study refers to curriculum guides in which the health related work and teaching is presented as an indirect or hidden aspect of the document. Health teaching within these documents is not generally directly stated or expressed. Explicit documents are those in which the health related work and teaching is presented as the central aspect of the document, and as such is clearly and precisely expressed and is referred to generally as a hidden curriculum. The task of analysis in this study has not been an easy one, primarily because the communities are different in their structures and orientations. There appears to be an explicit assumption within the health professional documents that this professional community is perceived as being a community whose work and teaching in the area of the school health programme is readily understood and as such is communicated in these documents. On the other hand, these assumptions do not appear to be communicated in the teacher documents. They contain a number of statements relevant to the teacher's involvement with the overall programme of school health that can be characterized as generally indistinct. This
may, in fact, reflect the situation for teachers that Yaeger (1981) and Kreuter, Christensen, and Davis (1983) have discussed. These writers have suggested that teachers are in fact involved with the work and teaching of the school health programme. However, it is a more indirect, obscure involvement when compared to that of the health professional. An extended discussion of the differences that exist between the communities of teachers and health professionals is contained in Chapter V.

3.1.2 Rationale and Use of Content Analysis

Content analysis has been chosen as the most appropriate methodology for this analysis of curriculum documents. The methodological discussion of this chapter has been expanded for the following reasons. Firstly, the author found that it was important to define the operational rules under which this methodology was conducted. This was done in order to clarify for the reader the precise conditions under which content analysis was employed. Secondly, many examples of the content analysis methodology in use within this study have been provided for other researchers who may wish to replicate or expand such a study.

3.1.3 Defining Content Analysis

Content analysis is a research tool that is frequently used in the social sciences, (Holsti, 1969; Carney, 1972). It is especially suitable for studies involving descriptive data compilation and in research that tests or extends theories (Borg and Gall, 1983). It is a methodology that is most appropriate
for use in instances in which verbal, written or pictorial data is to be analyzed for the content of underlying communication. Carney (1972) described content analysis as being applied with maximum suitability in the analysis of the images which people have about certain aspects of reality. Berelson (1952) advocated its use in identifying specific message characteristics in an objective and systematic manner. He stipulated that a major purpose of content analysis is the making of inferences. The inference making, in this study, constitutes the final phase of analysis in which the documentary patterns of beliefs, intentions, and end products of the work and teaching of teachers and health professionals in this area are discussed.

3.1.4 Theoretically Oriented Content Analysis

The specific type of content analysis that is used in this study is theoretically oriented content analysis which appears to have certain advantages for the type of research that is pursued in this study. Some form of theory always underlies the work of theoretical content analysis and provides a basis of inquiry. The theoretical framework establishes a particular frame of reference and a stability for the process of inquiry. In this study the theoretical writings of the sociology of knowledge related to the social construction of knowledge and the linkage of this knowledge to epistemic communities serves to provide a strong, theoretically sound base for the analytical process of content analysis. The theory is used to create categories thereby creating a strong link between the theory and
findings. Carney (1972) in writing about this theoretical basis of inquiry, described the process as providing stability for the overall research work of content analysis. He suggested that in order for a reliable analysis to be accomplished there must be a theoretical basis or body of findings that will serve to guide the work.

3.1.5 Advantages and Constraints

There are clearly defined advantages as well as constraints in the use of content analysis. It is imperative that the researcher be cognizant of both aspects before deciding on the appropriateness of this methodology. The issues of reliability, validity, and systematic utility have been addressed in this study and will be discussed as follows.

3.1.6 The Interpretation of Validity

Traditionally the term validity has been used to designate the degree to which a specific measurement produces data that reflects accepted interpretations about a specific concept. In this thesis the school health programme and its interpretation in various curricula documents has been investigated. Whereas the broad conceptual area explored was the school health programme, this investigation also focused on the central concept of "health". Because "health" is a concept with little agreed upon consensus of definition, the working definition for extraction of data depended on the most widely used definition of health, as interpreted by the World Health Organization (1978) and the more recent health concept research of Brumby,
In the final analysis the validity of this study is based on the following. Firstly, as previously discussed, a commonly used working definition of "health" was employed initially for the purpose of verbatim data extraction of health statements from all documents researched in this study. Secondly, the Australian Health Classification, a scheme that further classifies health dimensions, was used as an additional analytical tool. Thirdly, the categories of analysis derived from the sociological theories that frame this study were equally applied to the data. Fourthly, the inferences drawn from the findings were interpreted in the context of the Sociology of Knowledge theory, a theory whose basic assumption is predicated on the belief that all knowledge is socially constructed.

3.1.7 Reliability and Validity

The literature pertaining to content analysis contains a variety of directives about the issues of reliability and validity. Babbie (1986) addressed the situation as follows. He contended that the content analyst faces a fundamental choice between validity and specificity. In the coding of manifest content there is a specificity similar to that of a standardized questionnaire. Manifest content coding has the advantages of ease and reliability; a disadvantage of validity. The question to be answered is how valid is the content counted. Is there a deeper, more meaningful interpretation that can be made? Alternatively, Babbie recommended that communication can be
coded for its latent content, its underlying meaning. This method increases the validity but decreases reliability. He suggested that the solution to the problem was to insure both reliability and validity by using both methods whenever possible. In this study both manifest and latent aspects of content have been analyzed. For example, the findings include tabulations in Categories I and III of how often certain Health Dimension Classification sub-categories, such as "drugs" and "nutrition", appear in the data. In addition, these tabulations are also interpreted for their underlying meanings.

Berelson (1952) observed that validity does not seem to be a major problem for the content analyst. Generally, he suggested that a careful definition of categories and a well thought out analytical scheme would take care of the problem. He also stated that reliability is enhanced through the following processes: finding simple categories and units of analysis; utilizing experienced and well trained coders; and producing precise and complete sets of coding rules as well as illustrations or examples.

This study has attempted to address all these processes. The unit of analysis, the theme of the category, was kept as simple as possible. Secondly, the researcher, the sole coder, had used this methodology in other studies and therefore had prior knowledge and familiarity with the technique. Thirdly, the decision rules in this thesis were written to reflect both the precision and complexity of the task. Finally, the author has provided extensive illustrations through the use of examples that are interspersed throughout the study.
Borg and Gall (1983) discussed the necessity to clearly define the decision rules that are used in the classification system of content analysis in order to ensure reliability. The clear definitional use of decision rules is predicated on the assumption that the overall classification system is itself well thought out and developed to match the research intent of the analyst. The decision rules for the analysis of data of this study are discussed in detail under Decision Rules in this chapter.

In addition to adhering to the overall process of checks and balances suggested by Berelson (1952) in discussion of reliability and validity, the following procedures were used in this study as further safeguards.

Because the research extended over a period of several years there was ample time to carefully refine category development and interpretation. Discussions were held with informed colleagues concerning the reliability and validity of the study's category construction and issues such as inclusion or exclusion of the few unusual or atypical statements that were found in the curricula documents. It was also found useful to compare these unusual statements with the accompanying textbook for further clarification. Generally, the previously discussed process of: clearly defined category construction; the careful analytical technique pursued by the sole coder; utilization of precise coding rules; and use of extensive examples addressed the problem of reliability and validity.
3.1.8 Quantitative versus Qualitative Aspects of the Study

Much of the literature concerning content analysis appears to divide this methodology into two diverse groups. The first of these groups can be described as classical content analysis in which the process of quantification of data is a central issue. The second group can be described as primarily qualitative in approach, with little emphasis being placed on the need to quantify data in order to be able to draw inferences from the findings. As background to the point of view that is taken in this study, the writings of Berelson (1952) are particularly useful. He states that there can be no rigid dichotomy between quantitative and qualitative analysis. He also observes that just as quantitative analysis assigns relative frequencies to different qualities (or categories), qualitative analysis also contains quantitative statements in a rough form. In this study, for example, although the primary focus is qualitative, there are numerical frequencies provided for categories of statements that were amenable to quantification. Additionally, the utilization of such terms as "more emphasis" or "no references" provide quantitative information about the data that adds to the overall analysis of areas of research pursued in this study.

In general, the focus of this study is qualitative rather than quantitative and centres around the utilization of theoretically informed content analysis. Berelson suggested that the qualitative analyst is relatively less concerned with the content as such than with the content as reflecting a deeper and more complex phenomena under study. He also stated that
qualitative analysis is oriented toward a methodological intent to look at analysis units on the assumption that meanings preside within the totality of impression, the Gestalt, not within an atomistic combination of measurable units. The overall intent in this study was to uncover and explicate this total impression of the phenomena of the school health programme as documentarily displayed.

3.1.9 Research Methodology and Theoretical Framework

The selection of the most appropriate methodology for documentary analysis was determined in the following manner. Firstly, the analysis involved a documentary data base from which comparisons between groups were made. Secondly, the research questions to be asked of the data involved a central idea or theme that was to be analyzed. In both instances the choice of theoretically informed content analysis was found to be useful. The selection of theoretically informed content analysis indicates an on-going emphasis on the underlying theory of the study. The theory of this research was built on the writings of sociology of knowledge theorists: Holzner and Marx (1979), Schutz (1962, 1967) and Smith (1974). These theorists provide a sociological perspective that enhances our ability to better understand the problematic situation of the school health programme.

Smith (1974) has stated that much of what we know about the world is mediated to us through the use of documents. Documents reflect a social construction of a particular reality. In this thesis it is argued that the documents analyzed from the
communities of teachers and health professionals reflect the particular ways in which school health education programmes are documentarily constructed. In addition to the theory of documentative substantiation of social reality that is represented in the writings of Smith (1974), there is the focus on the two communities embedded in this study, the teachers and health professionals. A central concept that guides this thesis is the belief that these two communities represent two distinctively different epistemic communities. As a result of this differentiation between communities, the school health programme may be understood and operationalized in diverse ways. Holzner and Marx (1979) further corroborate this view in their writings on the social construction of reality that occurs between epistemic communities such as that of the teachers and health professionals. Schutz (1962, 1967) broadens this perspective of the interpretation of social reality in his writings pertaining to the biographical construction of personal and group realities. He observes that the social biographies of such communities and the ways in which our biographical experiences have culminated in different perspectives has created a situation whereby we have different interpretations of social realities.

In summary, the theories of Schutz (1962, 1967), Smith (1974), and Holzner and Marx (1979) serve to guide the analysis in providing the theoretical framework upon which both the research questions and categories are based. The methodology of theoretically informed content analysis was closely tied to the overall theory of the research. Both content analysis and the
underlying theories of this study provided for the systematic extraction of data and data analysis which preceded the making of inferences. The methodology served to guide the precise, objective building of documentarily reflected aspects of the curricula from which a mosaic of selected facets of the school health programme was constructed.

3.2 Preliminary Decisions/Decision Scoring Rules

3.2.1 Reasons for Use

Decision rules are used in this study for the purpose of insuring that the overall goal of systematic, objective application of content analysis is carried out in all areas of the documentary analysis. Holsti (1969) and Carney (1972) provided a general discussion of decision rules as they are to be used in the work of content analysis. However, they did not address the range of complexity and problems, or more specifically, the kinds of complexities found in this study. In order to further clarify the intricate aspects of content analysis that were encountered in this thesis, the following discussion of decision rules is provided. This discussion is divided into two parts:

1) preliminary decisions; and

2) decision scoring rules.
3.2.2 Preliminary Decisions About the Data

At an early stage in the process of data analysis it appeared necessary for the analyst to devise a series of preliminary decisions and rules concerning the systematic treatment of data. This initial planning first involved the creation of preliminary classification decisions. Having arrived at the point in the analysis in which the various documents for analysis had been chosen, the first important decision of classification involved the necessity to decide upon a working definition of the concept of health that was used for the initial extraction of data from these documents. Of equal importance was the necessity to create and apply boundaries within the documents that would guide the data extraction. A decision was also made to extract the data verbatim in order to display with fidelity the statements from these various documents.

These verbatim data that were extracted from the curricula documents and placed in a computer file for the purpose of analysis are available from the author in printed form or on tape.

3.2.3 Definition of Health

After the appropriate documents had been selected for analysis a preliminary decision needed to be made about what definition of health would be used to guide the extraction of verbatim sentences from the documents. For this purpose health was interpreted as a concept related to the work and teaching aspect of Category I, II, and III. Specifically, a working
definition of health, described below, was used to extract statements in situations where the document appeared to discuss health concepts that related to the categories. These categories are:

**Category I** (institutional positions taken in relationship to stated objectives, goals, rationales, and beliefs that appear to be health related);

**Category II** (institutional role statements that appear to be related to the school health programme); and

**Category III** (institutional end process received by the student that appear to be related to the school health programme).

The concept or definition of health was based on a compilation of writings that are found in the literature. The most widely used definition of health, in general use, is that of the World Health Organization. The WHO definition describes health as being:

> a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

(W.H.O., 1978, page 55)

Minor corrections and variations on this central theme were added later. However, the primary areas of the physical, social, and mental domains of health remain intact.

In addition to the existence in the literature of many definitions of health that are related to the World Health definition, there are several that centre on the concept of school health education. Typical of these is the definition of Green and Iverson (1982). They describe school health education as a combination of learning experiences initiated by various
personnel in school settings in which the intentions are to develop behavioural skills essential for coping with decisions about health as well as necessary cognitive skills. One of the problems studied in this thesis is the fact that the literature concerning a health definition or concept contains few if any patterns of consensus as to agreed upon understandings. Indeed, the problem of a lack of consensus about the definition or concept of health in general is viewed as being central to the situation of the overall health programme in schools that is addressed in this study. The issue of understandings about health within the setting of the school is a complex one and is a situation in which there are a multiplicity of diverse patterns of understandings that appear in the documents surveyed.

In order to logically and systematically extract verbatim lines from the documents that were seen as being related to the central research problems of this study, the following working definition for health statements was constructed. Health statements were any statements that referenced the concept of health as being a physical, mental or social aspect of the human being's continuum between wellness and illness (WHO, 1978). The discussions of health were found to exist in the documents in all three domains of the cognitive, psychomotor and affective areas of teaching, learning and work activities. For example, the Science teacher can be described as involved with the work and teaching of health concepts in the following excerpts from the Junior-Secondary Science Curriculum Guide and Resource Book:
(cognitive) ....classify various organs into body systems....

(psychomotor) ....practice safe procedures in school laboratory....

(affective) ....assisting the student in developing responsible attitudes related to social/legal aspects of drug use.

(B.C.M.E., 1983, Teacher Reference Chart)

Similarly, the health professional is involved with the work and teaching of health as illustrated in the Vancouver Health Department's school health guidelines:

(cognitive) In-service education programs on health subjects for school personnel. (as part of the Physician's (Medical Health Officer II) activities); (page 65)

(psychomotor) ....helping students learn to brush and floss properly.... (referenced under Dental Hygienist's activities); (page 57)

(affective) ....reinforcing healthy behaviour patterns and discouraging negative ones.... (listed under School Aged Child Program Goals). (page 2)

(Marshall, 1982)

In summary, health is defined in this study as encompassing all areas of teaching and work activity in which cognitive, psychomotor, and affective domains of teaching and learning are described as occurring in the school curricula. Health is understood as encompassing the physical, mental, and social domains of the human being in a continuum that includes descriptors of both well being and illness.

The second preliminary decision involved using this working definition of health as a guideline for the verbatim line extraction of documentary material. This part of the analysis involved a lengthy process of reading every line of the documents selected for analysis and extracting sections that
seemed to belong to the broad definitional understanding of health. An important part of the process centres on the ability of the analyst to make the work of line extraction as systematic as possible. In the case of the documents in this study the following parameters on the location of category data was used as a guideline:

1) Category I data were found in the sections of the document where the health related objectives, goals, rationales and beliefs of the program were discussed as being related to some aspect of the overall school health program.

2) Category II data appeared in sections of the document where a role statement could be construed as related to the overall situation of the school health education program. The use of "role" as a category is further defined in this chapter. The category of role also includes role statements from the document that serve to provide epistemic frames of reference and rationales for role utilization in which specific views concerning "role" within a particular community are displayed.

3) Category III data appeared in sections of the document where a health related teaching or work process was received by the student. The use of "process" is discussed in this chapter as well as an expanded discussion of three category definitions.

To summarize Phase I of this process, the work of the analyst prior to actual category construction involved the following steps in which preliminary classification decisions were made:
a) selection of all documentary data to be analyzed;
b) development of working definition of health for data
extraction;
c) construction of boundaries for data extraction; and
d) method of extraction to be used for verbatim line entries.

After the preliminary classification decisions were made, the next step was the formulation of decision scoring rules for category placement. In this second level process the decision scoring rules were applied to:

1) instances in which statements appeared to belong to more than one category; and
2) instances in which the teaching/learning focus as health related topics appeared to be unclear in the document.

In these instances the intent was to clarify the data analysis process and enhance the accuracy of the categorization process.

There are three major areas that appear under this process of category construction that were treated as areas requiring the use of precise decision scoring rules.

3.2.4 Decision Scoring Rules

The first of these areas involved the need for precise rules concerning situations in which verbatim data were found to belong to more than one category. For example, an entry from the The School Health Program Procedures Manual of the Vancouver Health Department indicates that the Community Health Nurse and the Registered Nurse are responsible for vision testing in the school. This single, line item entry tells us both the job description (under Category II: Role, "subdivision - Job
Description"), as well as the end product received by the student, (under Category III, End Product). In these instances of overlap the data is entered as combined categories in which the document's amalgamation of data is displayed.

Additionally, there are instances in which the document combined several "dimensions of health" into a single sentence. For example,

Physical education aims to develop individuals who are physically, intellectually, emotionally, and socially mature.

(B.C.M.E., 1980, page 1)

This line item is repeated under the Physical, Mental, and Social classifications of the Health Dimension Classification scheme and referenced accordingly as "Repeated".

Another area in which a scoring rule had to be devised involved Category II: Role. Like the Health Dimension Classification scheme in which subdivisions were established (Brumby, Garrard, and Auman, 1985), Category II required a similar subdivision in order that the data be systematically approached. A definitional guideline for the subdivisions of the concept of role were derived from A Dictionary of Education (Rowntree, D., 1981) and Dictionary of Education (Good, C.V., 1959). These subdivisions are:
a)

Social Role: expected social behaviour of individuals occupying certain positions. An example of this would be

The physician is expected to take an advocacy role on behalf of the school aged child in regards to health issues.

(Marshall, 1982, page 64)
Social role is also extended to include the social role of a discipline. For example,

(the Junior-Secondary Science Programme) should also attempt to show that the disciplines of science together contribute to a greater understanding of our world.

(B.C.M.E., 1983, page 3)

b) **Job Description**: the description of a job, its component tasks, and the situations in which individuals perform those jobs. An example of this subdivision is

....the public health nurse is responsible for the coordination of health services....

(B.C.M.H., 1982, page 1)

c) **Role Set**: This involves the network or interaction of roles indicated in a given setting. The setting studied here is the school and its overall programme of school health. An example of this subdivision is:

Health personnel (Vancouver Health Department) provide support services to supervisory aides and other school staff concerned with the care of a sick student.

(Marshall, 1982, page 8)

The final area in which decision scoring rules were considered to be essential was the situation of statements extracted from the documents in which relationships to teaching focus and health areas appeared to be unclear. In these instances clarification was determined by text book cross-referencing. For example, the science curriculum document indicates that students will

....be given opportunities to grapple with wider social considerations stemming from ecological and resource development issues in their locale.

(B.C.M.E., 1983, page 85)
In this example the prescribed teaching texts indicate some evidence of a human health related issue of man's interaction with the environment and in such instances the item was entered as related to the social domain of health. Again, it should be pointed out that this study does not involve the teacher or health professional's interpretation or actual implementation of these documents. This study focuses instead on certain documentary aspects of the concept of health as it appears to be related to the overall attendant work and teaching of these communities.

3.3 Category Construction

3.3.1 Categorization and Theory

Theoretically informed content analysis provided an ongoing link between the underlying theory of the research and the categories. In this study the three categories were derived from the theory of Holzner and Marx (1979). In their writings about knowledge organization, distribution, and dissemination Holzner and Marx (1979) emphasized the key areas of institutionalized positions, roles, and processes within the current knowledge system. "Institutionalized", as it is used in this study, refers to the established, validated, and formalized ways by which a community constructs a concept such as "position", "role", or "process". These three key areas of institutionalized positions, roles, and processes, in this study, become Categories I, II, and III and are described below.
3.3.2 Categorization and Decision Rules

Whereas the linkage between category and theory assumes a crucial role in the process of content analysis, the connection between decision rules and category are also an important part of the work of the analysis. As previously discussed the decision rules that precede and help to anchor the work of categorization form an important part of the on-going construction of content analysis. Having formulated the preliminary decision rules and specific decision scoring rules related to categorization, the work of category construction entered the next phase.

The three categories of this analysis are described in detail as follows.

**Category I**

This category incorporates the notion of institutionalized positions as displayed in a variety of position statements that can be construed as relevant to the overall school health programme. Category I is limited to documentary extracts from goals, objectives, rationales and belief statements that appear to be school health education related. An example of Category I is:

*Goal of the Guidance Programme: To promote within the student an understanding of his own behaviour and the behaviour of others.*

(B.C.M.E., 1971, page 3)

**Category II**

This category involves the concept of institutionalized roles and is subdivided as: social role, job description and role set.
Role statements were extracted for analysis wherever the document appeared to link role statements of the work and teaching of these communities with the definition of health as used in this study and additionally where epistemic understandings about the concept of role are displayed. Role is subdivided into social role, job description, and role set, and has been discussed previously under Decision Rules. An example of social role is found in the health professional documents' description of the physician as advocate for the school aged child in health matters. Job description examples from these same documents refer to the work of the Community Health Nurse, the Registered Nurse, and the School Physician as being involved with the delivery of first aid and emergency care when required in the school setting. A role set example from the health professional documents refers to the Community Health Nurse as involved with provision of in-service programs about School Aged Child Programs to school staff as requested.

Category III

Category III reflects the third key idea of Holzner and Marx (1979) in their focus on institutionalized end processes within the paradigm of knowledge organization, distribution and dissemination. This category contains references from the representative documents of teacher and health professional communities in which the details of their work and teaching activities indicate an institutionalized process that can be seen as being an end product received by the student. Process is defined in this study as being actions or operations that conclude in an end product. Examples of Category III data
include the statement of an end product of the work of the health professionals received by the student in the form of vision testing in the school. A parallel end product of this institutional process is found in the teacher document under curriculum guidelines for the Physical Education teacher. In this instance the student receives a lesson in the fitness program as well as an end product of "fitness evaluation".

In summary the categories provide the key to the objective and systematic work of content analysis. The categories are directly tied to the theory and the research questions so that the end result is a series of precise and utilizable patterns of understandings that have been documentarily displayed.

3.3.3 Additional Analysis of Category Data

An additional analytical device has been used in this study. The Health Dimension Classification scheme derived from the Australian research on health concepts (Brumby, Garrard and Auman, 1985) has been applied to Categories I and III. This classification scheme, when applied to the data of Categories I and III, was found to provide extensive additional information about these areas of the data that was not revealed with the use of a singular category approach. The classification technique that has been applied to Categories I and III centres around the concept of health originally espoused by the World Health Organization (1978) in which the domains of the physical, mental and social aspects of health appear. The classification scheme developed in the Australian study (Brumby, Garrard and Auman, 1985) used as its data base interviews with students in which
the concept of health was investigated. The primary
descriptions of physical, mental, and social, as well as
subdivisions of these domains of health were arrived at through
a content analysis of extensive interviews with these students.
In the research presented in this thesis, the Australian Health
Dimension Classification scheme has proved to be particularly
useful in providing a clear and concise methodological tool that
increases overall understanding of relevant patterns within the
document.

In the present study the Australian Health Dimension
Classification scheme has been modified as follows. The
subclassification of "hygiene" has been altered to encompass the
two subcategories of "safety" and "prevention, diagnosis, and
treatment". The subclassification of "lifestyle" has been
modified to focus on relationships between the individual,
society, and the environment as they relate to health issues.
The concepts of "well-being" and "absence of disease" referred
to in the 1978 World Health Organization definition of health do
not appear in the modified Health Dimension Classification
scheme that is used in this study. The Australian study
acknowledged these concepts as being "descriptors which embrace
the physical, mental and social dimensions of health". In this
study these descriptors have been used in a more general way
within the overall discussion of Chapter V rather than employed
as separate classifications of data.

The Health Dimension Classification format for analysis is
schematically outlined as:
General references

Physical references, subdivided into:
   (Body)
   (Drugs)
   (Nutrition)
   (Fitness)
   (Safety and Prevention, Diagnosis, and Treatment)

Mental references, no subdivisions

Social references, subdivided into:
   (Interpersonal)
   (Lifestyle)

General
The General section contains comments providing background material that appeared useful in providing additional context for the documentary references. This category rarely appears in the documents and was included only in situations related to clarification or enhancement of the data. An example of this General documentary information is: "The four goals of the Junior Secondary Science Programme are...". These particular goals are not classified under the headings of Physical, Mental or Social. However, the inclusion of the four goals of Science was seen as relevant to the overall descriptive display of this document.

The three primary domains of health (physical, mental, and social) and their subdivisions are outlined as follows:

Physical
The physical domain is divided into the subclassifications of: body, drugs, nutrition, fitness, safety/prevention, diagnosis, and treatment.

(Body)

The subclassification of (body) contains references in which teaching/learning/activity emphasis in the data is
focussed on body functions and systems. An example of this classification is:

...demonstrate simple understanding of human body functions.

(B.C.M.E., 1983, Teacher Reference Chart)

(Drugs)

The subclassification of (drugs) contains references in which teaching/learning/activity emphasis is related to drugs. An example of this classification is:

...be alert to positive and negative effects drugs have on the body.

(B.C.M.E., 1983, Teacher Reference Chart)

(Nutrition)

The subclassification of (nutrition) contains references in which teaching/learning/activity emphasis is on nutrition. An example of this classification is:

(Students should) appreciate that good nutrition is related to diet and food availability.

(B.C.M.E., 1983, Teacher Reference Chart)

(Fitness)

The subclassification of (fitness) contains references in which teaching/learning/activity emphasis is on fitness. An example of this classification is:

...students should be able to demonstrate a positive attitude toward the value of physical activity for health and fitness....

(B.C.M.E., 1980, page 4)

(Safety and Prevention, Diagnosis, and Treatment)

The Australian subclassification of "hygiene" has been modified in this study. Subclassifications of "safety" and "prevention, diagnosis, and treatment" replace this previous
subset. Examples of these subsets are:

(Safety)

....demonstrate a concern for safety when using household chemicals....

(B.C.M.E., 1983, Teacher Reference Chart)

(Prevention, Diagnosis, and Treatment)

Grade 9 students should receive a reinforcing immunization against diptheria, tetanus and poliomyelitis.

(B.C.M.H., 1982, page 3)

Mental

This classification contains all references in which teaching/learning/activity emphasis is on mental, emotional and psychological health. This classification also includes references about decision making and value clarification as related to students in classroom settings. There are no subdivisions. Examples of these references are:

(Guidance)

Objective I: To promote within the student an understanding of his own behaviour.

(B.C.M.E., 1971, page 3)

Teaching topics: Identification of values in real-life situations.

(B.C.M.E., 1971, page 20)

(Health Professional)

Objective 7: To identify and facilitate correction of....emotional health problems which may affect the performance or general well-being of the student.

(B.C.M.H., 1982, page 7)
Social

(Interpersonal)

The subclassification of (interpersonal) contains all references in which teaching/learning/activity emphasis is on relationships with others. An example of this reference is:

To promote within the student an understanding of the behaviour of others. (Guidance)

(B.C.M.E., 1971, page 3)

(Lifestyle)

This subclassification of (lifestyle) contains all references in which teaching/learning/activity emphasis is on relationships between the individual and society or environment. An example of this reference is:

....appreciate needs and problems in waste disposal.

(B.C.M.E., 1983, Teacher Reference Chart)

3.4 Summary of Methodology

In summary, the process of content analysis that is used in this study can be outlined as follows.

I. Theoretical Framework Construction

The initial process for theoretically informed content analysis used in this study required the selection of theories that would frame the construction of categories and serve to illuminate interpretations of findings that were derived from the analysis. Selected theories from the sociology of knowledge have been chosen for this purpose.
II. Data Preparation Prior to Categorization

This stage involved selection of representative data for analysis, verbatim extraction of documentary statements using working definitions of health, decisions about boundaries for data extraction, and decision scoring rules.

III. Categorization

Categories I, II and III were derived from the theoretical framework and directly tied to the research questions of this study. Additionally, the Health Dimension Classification scheme provided an extra dimension for the analysis of Categories I and III.

IV. Construction of Patterns of Findings

The findings of the study display the various patterns of meanings that were found in the documents. The overall patterns were derived from the three categories of analysis and the additional meanings displayed in the Health Dimension classification of Categories I and III. Tables of results which provide tabulations of Categories I and III and summaries made up the final display of data patterns.

V. Inference Making: Final Stage of Analysis

The final stage of analysis involved the formulation of inferences, which were based on the documentary findings as displayed in the overall patterns of analysis. Specific theories related to epistemic communities, knowledge development and dissemination from sociology of knowledge researchers were utilized in the final stage of inference making.
CHAPTER IV

FINDINGS

4.1 Introduction

Chapter IV presents the findings of this thesis. This chapter contains the results of the analysis of documents investigated in this study. Categories I and III have been additionally analyzed by means of the Health Dimension Classification Scheme previously discussed in Chapter III. Categories I and III also display tabulated results in the form of tables. Category II was analyzed in a different manner, as discussed in detail within Chapter III. Summaries and examples of content for all categories of analysis are also provided in this chapter. Chapter V contains an extended discussion of these findings.


4.2.1 Category I: Health Dimension Analysis (see Table I)

The significant pattern that emerges from these data is the unidimensional emphasis on the physical domain of health as it appears in the documentary references related to stated goals, objectives, rationales, and beliefs. Social aspects of the health domain of science teaching appear in the Categories II and III Combined.
<table>
<thead>
<tr>
<th>Physical</th>
<th>No. References</th>
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<td>1</td>
</tr>
<tr>
<td>Mental</td>
<td>No references</td>
</tr>
<tr>
<td>Social</td>
<td>No references</td>
</tr>
</tbody>
</table>

Examples

General

The four goals of the Junior Secondary Science Programme are:

Goal A: The Junior Secondary Science Program should provide opportunities for students to develop positive science attitudes.

Goal B: The Junior Secondary Science Program should provide opportunities for students to develop the skills and processes of science.

Goal C: The Junior Secondary Science Program should increase the students' scientific knowledge.

Goal D: The Junior Secondary Science Program should provide opportunities for students to develop creative, critical and formal (i.e. abstract) thinking abilities.

(B.C.M.E., 1983, pages 5-6)
Physical

(Body) and (Nutrition)

The physiological issues leading to adulthood and the accompanying increase in self-awareness form a natural prologue to a formal examination of the human body and of health and nutritional issues.

(B.C.M.E., 1983, page 3)

Mental

No References

Social

No References

4.2.2 Category II: Role

Social Role

Science, as a discipline, is described as providing a scientific perspective to students in regards to their changing selves and world as well as the impact of technology on this relationship.

Role Set

This category displays teachers interacting with health professionals in a health related role setting. The emphasis here is on teacher and health professional interaction in the form of the health professional being invited into the classroom setting for specific health teaching purposes.

Examples

Social Role

...science offers junior secondary students a particularly suitable perspective on their changing selves and world.

(B.C.M.E., 1983, page 3)
Job Description

(It is suggested that) the material contained in this guide be taught in an integrated manner....the major issues facing society today - like disease, overpopulation and resource depletion, cannot be completely understood through one discipline of science.

(B.C.M.E., 1983, page 97)

Role Set

(listed under possible activities) Invite the health nurse to test the range of senses using hearing tests, eye charts, and colour blindness cards.

(B.C.M.E., 1983, page 39)

4.2.3Categories II and III Combined: Role and End Product

(see Table II)

The information provided in this section of the document (Junior-Secondary Science Teacher Reference Chart) provides detailed, descriptive information about the embedding of health teaching within the formally prescribed curriculum guidelines for Science and the specific guidelines for teachers to follow in the essential and optional content areas. By means of an additional application of the Health Dimension Classification Scheme, further information is provided about the teaching and learning patterns within the document.

It should be noted that, concerning "essential topics: drugs and nutrition", the topic of "drugs" only appears in Grade 8 while "nutrition", as a topic, only appears in Grade 9. The Physical, subset "body", area of content displays a well distributed documentary pattern across Grades 8, 9, and 10. There are three times as many references to the physical as to the social domain. Application of the Health Dimension
<table>
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<td>4</td>
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<td>10</td>
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<td><strong>(Drugs)</strong></td>
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<td>0</td>
</tr>
<tr>
<td><strong>(Nutrition)</strong></td>
<td></td>
</tr>
<tr>
<td>Grade 8</td>
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</tr>
<tr>
<td>Grade 9</td>
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</tr>
<tr>
<td>Grade 10</td>
<td>0</td>
</tr>
<tr>
<td><strong>(Fitness)</strong></td>
<td>no references</td>
</tr>
<tr>
<td><strong>(Safety)</strong></td>
<td></td>
</tr>
<tr>
<td>Grade 8</td>
<td>2</td>
</tr>
<tr>
<td>Grade 9</td>
<td>2</td>
</tr>
<tr>
<td>Grade 10</td>
<td>1</td>
</tr>
<tr>
<td><strong>(Prevention, Diagnosis, Treatment)</strong></td>
<td></td>
</tr>
<tr>
<td>Grade 8</td>
<td>0</td>
</tr>
<tr>
<td>Grade 9</td>
<td>0</td>
</tr>
<tr>
<td>Grade 10</td>
<td>0</td>
</tr>
</tbody>
</table>

| Mental                         | no references        |
| Social                         |                      |
| **(Interpersonal)**            | no references        |
| **(Lifestyle)**                |                      |
| Grade 8                        | 4                    |
| Grade 9                        | 1                    |
| Grade 10                       | 2                    |
Classification Scheme to the final products of the Categories II and III combined analysis provides additional confirmation of emphasis on the physical domain.

In the following display of analysis Categories II and III were combined for these reasons. The Science document, as written by the Ministry of Education curriculum developers, presented an amalgamation of Category II (job description: essential/optional teaching areas), Category III (end products), and designated grade levels for specific content areas. Having assessed the complexity of this portion of the document, a decision was made to combine these divisions of analysis into one concise table of results. Category II when not combined with Category III is analyzed separately and the findings are discussed under **Summaries** with examples provided.

**Examples** (Student Outcomes)

**Physical**

*(Body)*

develop a respect for the complexity and fragility of the nervous system.

*(B.C.M.E., 1983, Teacher Reference Chart)*

*(Drugs)*

be alert to positive and negative effects that drugs may have on the body.

*(B.C.M.E., 1983, Teacher Reference Chart)*

*(Nutrition)*

appreciate good nutrition and its relationship to common diets and availability of foods.

*(B.C.M.E., 1983, Teacher Reference Chart)*
(Safety)

demonstrate a concern for safety when using and storing household chemicals.

(B.C.M.E., 1983, Teacher Reference Chart)

(Prevention, Diagnosis, Treatment)

investigate problems involving nutrition, exercise or damage to a body system.

(B.C.M.E., 1983, Teacher Reference Chart)

Mental

No References

Social

(lifestyle)

develop a more responsible attitude toward self and society through a study of resources.

(B.C.M.E., 1983, Teacher Reference Chart)

4.2.4 Category III: Curriculum Integration (see Table III)

The science document is unique in its provision of curriculum integration teaching topics. The pattern of primary emphasis on the physical domain is similar to overall findings in the analysis of the science data.

Example

Physical

(body)

relate body systems to symbols and reactions.

(B.C.M.E., 1983, page 66)
TABLE III
Science: Category III and Health Dimension Classification
(Suggestions for Curriculum Integration)

<table>
<thead>
<tr>
<th>Physical</th>
<th>No. References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>20</td>
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<tr>
<td>Drugs</td>
<td>2</td>
</tr>
<tr>
<td>Nutrition</td>
<td>6</td>
</tr>
<tr>
<td>Fitness</td>
<td>2</td>
</tr>
<tr>
<td>Diagnosis/Prevention/Treatment</td>
<td>8</td>
</tr>
</tbody>
</table>

Mental
No references

Social
Lifestyle 6


It should be noted the Physical Education curriculum document follows a different pattern from that of science and guidance. The differences occur due to the fact that specific learning outcomes/topics as end products received by the student are not listed according to grade level. Instead the document lists outcomes as tied to the overall goal.

4.3.1 Category I and Health Dimension Analysis (see Table IV)

The Physical Education curriculum places emphasis on the physical domain with three times as many references to physical as to social aspects of health. References to the subset of "fitness" are particularly highlighted in this section of the analysis.
TABLE IV
Physical Education: Category I and Health
Dimension Classification

<table>
<thead>
<tr>
<th></th>
<th>No. References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical</strong></td>
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</tr>
<tr>
<td>Body statements</td>
<td>5</td>
</tr>
<tr>
<td>Nutrition</td>
<td>1</td>
</tr>
<tr>
<td>Drugs</td>
<td>0</td>
</tr>
<tr>
<td>Fitness</td>
<td>12</td>
</tr>
<tr>
<td>Safety</td>
<td>0</td>
</tr>
<tr>
<td>Prevention/Diagnosis/Treatment</td>
<td>2</td>
</tr>
<tr>
<td><strong>Mental</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>1</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>2</td>
</tr>
<tr>
<td>Lifestyle</td>
<td>0</td>
</tr>
</tbody>
</table>

Examples

**Physical**

(Body)

Physical Education aims to develop individuals who are physically mature.

(B.C.M.E., 1980, page 1)

(Nutrition)

Senior-program implications. Student needs to understand daily health practices regarding activity, nutrition and rest.

(B.C.M.E., 1980, page 3)

(Fitness)

(The fitness) concept is designed to provide opportunities for the students to develop a program which meets their own personal fitness needs.

(B.C.M.E., 1980, page 125)
(Prevention/Diagnosis/Treatment)

(Physical Education Programme at the Junior Secondary level) ....the student needs to understand the reasons for good health habits and the problems that may be faced during early teen and young adulthood years.

(B.C.M.E., 1980, pages 1-2)

Mental

Physical Education aims to develop individuals who are intellectually, emotionally mature.

(B.C.M.E., 1980, page 1)

Social

(Interpersonal)

Goal A: The Secondary Physical Education Programme should assist in developing and maintaining positive personal attributes and interpersonal relationships....

(B.C.M.E., 1980, page 4)

4.3.2 Category II: Role

Social Role

Physical Education, as a discipline within the school, is portrayed as essential to students' educational experience in terms of individual growth and development.

Job Description

Teachers are directed to extend skills learned at the elementary school level. There is an orientation toward encouraging students to maintain exercise and nutrition patterns described as enhancing health with particular emphasis on "fitness" teaching. The "fitness" emphasis within the domain of physical aspects of health appears to establish patterns similar to those found in "fitness" topic emphasis that is
discussed under Category I and Category III.

**Role Set**

No role set is indicated in document.

**Examples**

**Social Role**

Fitness makes a very significant contribution to the total well-being of all students.

(B.C.M.E., 1980, page 125)

**Job Description**

(The Fitness Programme) should be integrated into the physical education curriculum and not taught only as an isolated unit of instruction.

(B.C.M.E., 1980, page 125)

**Role Set**

No references

4.3.3 **Category III and Health Dimension Classification**

**End Products Received by Student** (see Table V)

The documentary evidence of this category presents a pattern of emphasis on the physical domain of health topics with significant orientations being displayed toward "fitness". There is a pattern of similarity between all documentary categories I, II, and III in the area of physical domain, "fitness" subset.
TABLE V

Physical Education: Category III and Health
Dimension Classification

<table>
<thead>
<tr>
<th>No. References</th>
<th>Physical</th>
<th>Mental</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Body</td>
<td></td>
<td>Interpersonal</td>
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<tr>
<td>4</td>
<td>Nutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fitness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Prevention/Diagnosis/Treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
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<td>4</td>
<td></td>
</tr>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Lifestyle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

Examples

Physical

(Body)

(Student will acquire) an understanding of the physiological concepts related to physical activity, such as the value of functionally effective posture and the effects of regular exercise on cardiovascular function.

(B.C.M.E., 1980, page 5)

(nutrition) and (fitness)

By the end of the Secondary Physical Education Program students should be able to demonstrate: - an understanding of concepts and methods necessary to achieve an appropriately high level of physical fitness such as the specificity of aerobic and anaerobic training and the importance of nutrition as it relates to physical activity.

(B.C.M.E., 1980, page 4)
(safety)

By the end of the Secondary Physical Education Program students should be able to demonstrate: - an understanding of movement principles including concepts related to body mechanics and safety such as integrating time, weight and space in developing a successful spike in volleyball.

(B.C.M.E., 1980, page 4)

Mental

By the end of the Secondary Physical Education Program students should be able to demonstrate: - an understanding of the psychological concepts related to physical activity such as the relationship between physical activity and physical and mental stress.

(B.C.M.E., 1980, page 4)

Social

(Interpersonal)

By the end of the Secondary Physical Education Program students should be able to demonstrate: - a positive attitude toward physical activity as a social experience such as appreciating the role of leadership through experience.

(B.C.M.E., 1980, page 4)

4.4 Analysis of Secondary School Curriculum Guide - Guidance

(B.C. Ministry of Education, 1971)

4.4.1 Category I and Health Dimension Analysis (see Table VI)

The major pattern that emerges for Category I is the document's emphasis on the mental domain of health. Mental references are twice those of the physical domain.
TABLE VI
Guidance: Category I and Health Dimension Classification

<table>
<thead>
<tr>
<th>No. References</th>
<th>Physical</th>
<th>Mental</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples

Physical

(Drugs)

The matter of drug abuse is of grave concern.

(B.C.M.E., 1971, page 5)

(Safety)

First Aid, under Guidance 10, to be revised.

(B.C.M.E., 1971, page 5)

Mental

Objective 1: To promote within the student an understanding of his own behaviour.

(B.C.M.E., 1971, page 3)
Social

(Interpersonal)

Objective 3: To assist the student in understanding the importance of community in our society; communication through the various media and communication among individuals.

(B.C.M.E., 1971, page 3)

4.4.2 Category II: Role

Social Role

The social role of guidance, as a discipline within the school, is described as meeting the changing needs of society and the needs of secondary school students. Documentary tension appears in the somewhat ambiguous statements of social role. In one instance the question is asked of the reader as to how far (to go) and how much responsibility the school should assume for the students' problems. This statement appears in contrast to a rather lengthy discussion of the perceived need for this discipline to be significantly involved with the problems of drugs and particularly in assisting the student to find solutions to the problems of drugs at this age.

Job Description

It should be noted that of the curriculum guides for the three teaching disciplines, the Guidance curriculum contains much more discussion that is related to overall aspects of job description. The tone of the discussion directed at the guidance teacher can be described as cautionary. The teacher is frequently instructed to avoid sensitive areas of teaching and to apply professional discretion as to the boundaries of subject matter that are discussed. This unusual facet of the guidance
document will be discussed further in Chapter V.

Examples

Social Role

The department takes the view that the school has both responsibility and opportunity to make a significant contribution to finding solutions, guiding young people, providing educational experience which will enable pupils to cope with such problems (drugs).

(B.C.M.E., 1971, page 5)

Job Description:

The teacher should avoid placing himself in the position of attempting to impose a set of values from above.

(B.C.M.E., 1971, page 9)

Role Set

(Family's Role) The public health nurse and other public officials may be helpful.

(B.C.M.E., 1971, page 6)

4.4.3 Category III and Health Dimension Analysis (see Table VII)

Emphasis on the topics, as the end product, is weighted toward the mental and social domains. The frequent occurrence of mental topics are similar to patterns described for Category I. The most notable references under the social category, a category which is second in referential statements in health dimension patterns, are the indications of the discipline's stress upon communication skills in this area of teaching. Topics referenced under the physical domain, (drugs) subset, reflect a focus of this content area that also appears in the (drugs) subset of Category I.
### TABLE VII

**Guidance: Category III and Health Dimension Classification**

<table>
<thead>
<tr>
<th>Teaching Topics</th>
<th>No. References</th>
</tr>
</thead>
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<td><strong>Physical</strong></td>
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<td>Body</td>
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<tr>
<td>Drugs</td>
<td>4</td>
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<td><strong>Mental</strong></td>
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<td><strong>Social</strong></td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>15</td>
</tr>
</tbody>
</table>

**Examples**

**Physical**

*(Body)*

- **Individual Differences**
  - A) Examination of physical growth rates and changing body.

  *(B.C.M.E., 1971, page 10)*

**Mental**

- Identification of values in real-life situations

  *(B.C.M.E., 1971, page 20)*

**Social**

*(Interpersonal)*

- Behaviour Standards
- Behaviour with the opposite sex

  *(B.C.M.E., 1971, page 10)*
4.5 Analysis of Guide to the Core Curriculum (Goal M)  
(B.C.M.E., 1977)

4.5.1 Category I: Health Dimension Analysis (no tabulation)  
Category I contains a single entry, the goal itself. This goal states clearly that skills and knowledge for healthful living are to be pursued within the setting of the school.

Category I and Health Dimension Classification  
The single entry (Goal M) is classified as General.

Example  
General  
(Goal M is) to develop skills and knowledge for healthful living.  
(B.C.M.E., 1977, page 32)

4.5.2 Category II: Role  
Social Role  
The social role is the implied role of the school as stated in this goal. This role is to develop skills and knowledge for healthful living.

Job Description  
Significant documentary statements appear here in the references to role responsibilities. At the Junior-Secondary level teachers of physical education and guidance are referenced as involved with health teaching. Science is referred to only within the context of "biology units of Science 8" (page 33). At the Senior-Secondary level emphasis is given to physical
education and guidance as having a "special responsibility regarding outcomes" (page 33). However, it should be noted that the Guide to the Core Curriculum (1977) was written prior to the revised Junior-Secondary Science Curriculum and Resource Guide (1983) that is analyzed in this study. Therefore, statements concerning the Science 8 biology are to be understood within this particular context.

**Role Set**

None indicated in document.

**Examples**

**Social Role**

(Goal M implies that the school has a responsibility)

to develop skills and knowledge for healthful living.

(B.C.M.E., 1977, page 32)

**Job Description**

Teachers of physical education have a major responsibility with regards to Outcomes M.9 - M.11 (physiology, first aid, and improving motor skills).

(B.C.M.E., 1977, page 33)

**Role Set**

No references

4.5.3 **Category III: Health Dimension Analysis** (see Table VIII)

The Health Dimensions analysis has been applied to the student learning outcomes (Category III of this goal). At the Junior-Secondary level, physical dimensions of health dominate. Senior-Secondary references portray documentary emphasis on all three health domains.
### TABLE VIII

Category III: Student Learning Outcomes and Health Dimension Classification

<table>
<thead>
<tr>
<th>No. References</th>
<th>Junior Secondary</th>
<th>Senior Secondary</th>
</tr>
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</tr>
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</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
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<td>0</td>
</tr>
<tr>
<td></td>
<td>Interpersonal</td>
<td>1</td>
</tr>
</tbody>
</table>

**Examples**

**Physical**

(Body)

During the Junior Secondary Years students should learn the functions of the digestive, respiratory, circulatory, reproductive, locomotor, and nervous system....

(B.C.M.E., 1977, page 33)

(Fitness)

During the Junior Secondary Years students should learn....to improve motor skills....

(B.C.M.E., 1977, page 33)
(Safety)

During the Junior Secondary Years students should learn....the fundamentals of first aid....

(B.C.M.E., 1977, page 33)

Mental

During the Junior Secondary Years students should learn .... recreational pursuits for adulthood ....

(B.C.M.E., 1977, page 33)

Social

(Interpersonal)

During the Senior Secondary Years students should learn....to lead a small group and at other times accept the leadership of others.

(B.C.M.E., 1977, page 33)

4.5.4 Category III: Subject Summary (no tabulation)

An analysis of this section of the document displays a diverse pattern of subjects that the document references as being related to this Goal M of healthful living. Subject and grade references display emphasis being placed on: Physical Education (Grades 8-11); Guidance (Grades 10-11); Science (Grade 8). Also included are a melange of miscellaneous subjects: drama, first aid, art, music, crafts, sewing, cooking, industrial education. The most notable facet of this document is its eclectic display of what are documentarily referenced as being areas of health teaching within the school.
Example

(Subject areas in which Goal M is described as a component of content are):
- Physical Education
- Guidance
- Science
- Drama
- First Aid
- Art
- Music
- Crafts
- Sewing
- Cooking
- Industrial Education

(B.C.M.E., 1977, page 33)

4.6 Analysis of Public Health Nursing Program for School Age Children (B.C. Ministry of Health, 1982)

4.6.1 Category I and Health Dimension Classification

(see Table IX)

The emphasis in Category I analysis of this document is on the involvement of the public health nurse in the area of prevention, diagnosis and treatment. Mental health, when referenced, also appears related to the concept of prevention, diagnosis and treatment.
Table IX
Public Health Nurse: Category I and
Health Dimension Analysis

<table>
<thead>
<tr>
<th>Health Dimension</th>
<th>No. References</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Prevention</td>
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</tr>
<tr>
<td>Mental</td>
<td>2</td>
</tr>
<tr>
<td>Social</td>
<td>0</td>
</tr>
</tbody>
</table>

Examples

Physical

(Prevention, Diagnosis and Treatment)

Objective 3: To minimize the incidence of communicable disease in the school population and offer protection against specific diseases.

(B.C.M.H., 1982, page 3)

Mental

Objective 6: To assist students with physical or emotional disease to utilize educational opportunities and to promote their independence in adult life.

(B.C.M.H., 1982, page 6)

Social

No references

4.6.2 Category II: Role

Social Role

The social role of the public health nurse in Category II of this document emphasizes the promotion of good health both at the school level and as foundational to adult life.
Job Description

Job descriptions within this document are lengthy. This is a situation that exists in both health professional documents. The formally prescribed role of the health professional in an adjunctive role to the school is rigorously detailed. The public health nurse is identified as the primary health worker. In addition to her health service facilitative duties between the health unit and the school, the public health nurse in the school is documentarily portrayed as an extensive recorder of student health information. She is also called upon to be a consultant on many health issues and a direct provider of a variety of health care services.

Role Set
The Health Professional is described as interacting with:
- allied community agencies and disciplines;
- principal;
- school personnel, teaching and non-teaching;
- home (families of students);
- family physicians;
- interprofessional health team;
- school board team.

Examples

Social Role
(The Public health Nursing Program for School Age Children aims to) promote a healthy lifestyle and facilitate the attainment of optimal health by school age children to enhance their learning capacity and lay the foundations for health in adult life.

(B.C.M.H., 1982, page 1)
Job Description

The Health Act (Section 38) provides for technical health services and other duties to be carried out by a health unit for boards of school trustees.

(B.C.M.H., 1982, page 1)

Role Set

Meet with the principal in early September to discuss the Public Health Program for School Age Children in order to establish the health activities to be provided by health unit staff for the school year and to establish an ongoing system of communication between the school and the health unit.

(B.C.M.H., 1982, page 2)

4.6.3 Category III and Health Dimension Classification

(see Table X)

Category III of this document displays an end product received by the student in the school setting that is strongly weighted toward prevention, diagnosis and treatment. The documentary patterns of Category I and Category III appear to be mutually complementary in that there is a similar patterning of beliefs, and understandings about the documentary perceptions of this discipline and the end products that are received by the student. In both instances the document displays a health professional who is strongly embedded within the paradigm of prevention, diagnosis, and treatment.
TABLE X  
Public Health Nurse: Category III and 
Health Dimension Analysis

<table>
<thead>
<tr>
<th>No. References</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Safety</td>
</tr>
<tr>
<td>Prevention/Diagnosis/Treatment</td>
</tr>
<tr>
<td>Mental</td>
</tr>
<tr>
<td>Social</td>
</tr>
</tbody>
</table>

Examples

Physical

(Safety)

Provide assistance as required to school staff responsible for the control of environmental hygiene....Refer to the public health inspector as indicated.

(B.C.M.H., 1982, page 3)

(Prevention/Diagnosis/Treatment)

Grade 9 students should receive a reinforcing immunization against diptheria, tetanus, and poliomyelitis.

(B.C.M.H., 1982, page 3)

Mental

(Where required, students will have available) a support system for each student who has an acute health or family problem (physical or emotional) which will assist them to cope with the crisis and obtain required care.

(B.C.M.H., 1982, page 6)

Social

No references
4.7 Analysis of School Health Program Procedures Manual
(Marshall, 1982)

4.7.1 Category I and Health Dimension Classification
(see Table XI)

The overall emphasis is on the physical domain of health. The mental domain of health, while referenced, does not receive the emphasis that is given to the physical aspects of health. In contrast to the Public Health Nursing Program for School Aged Children, the School Health Program Procedures Manual, published by the Vancouver Health Department, displays less emphasis on prevention, diagnosis, and treatment statements within the overall classification of Physical.

| TABLE XI |
| VHD: Category I and Health Dimension Classification |

<table>
<thead>
<tr>
<th>No. References</th>
</tr>
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<tbody>
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<tr>
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<tr>
<td>Drugs</td>
</tr>
<tr>
<td>Fitness</td>
</tr>
<tr>
<td>Prevention/Diagnosis/Treatment</td>
</tr>
<tr>
<td>Mental</td>
</tr>
<tr>
<td>Social</td>
</tr>
<tr>
<td>Undifferentiated</td>
</tr>
<tr>
<td>Interpersonal</td>
</tr>
</tbody>
</table>
Examples

Physical

(Body)

(a rationale for providing rehabilitation therapy): to increase sensory awareness, sensory integration, to increase confidence.

(Marshall, 1982, page 22)

(nutrition)

School Aged Child Program Goals - To reinforce healthy behavior patterns and discourage negative ones....in nutrition.

(Marshall, 1982, page 2)

(Drugs)

Program Goal: Reinforce positive behaviour and discourage negative behaviour in smoking, alcoholism and drug dependence.

(Marshall, 1982, page 2)

(Fitness)

(A goal for enabling handicapped students to achieve whatever levels of fitness are possible): Handicapped students are encouraged and helped to integrate as fully as possible into school activities and to cope with disabilities.

(Marshall, 1982, page 16)

(Prevention/Diagnosis/Treatment)

(An objective of communicable disease control - immunization): There will be conscious efforts made toward an official policy of mandatory immunization for the school aged child population.


Mental

Program Goal: Provide information for healthy lifetime lifestyle including marriage, parenthood, career or job, aging, loss and death.

(Marshall, 1982, page 2)
Social Program Goal: Continue optimal social growth and development.

(Marshall, 1982, page 2)

4.7.2 Category II: Role
Social Role

The social roles of the selected, representative health professionals who work in the school health program portray these individuals as socially sanctioned providers of health care knowledge and service to the student recipient. The physician's social role is the more divergent of the groups analyzed in that the document references his role as taking on a special position within the overall whole of the school health program. His role is given primary social significance within this program and within the community in general. The differences that are displayed within the document's descriptive role outline for the physician, as contrasted with the role of the community health nurse, who is referenced in this document as the key health professional for the school health programme, will be discussed further in Chapter Five. The key social role of these health professionals is that of providing health care to school age children. They appear to be socially sanctioned within this document, as illustrated by the Health Act and the School Act of British Columbia.

Job Description

All four examples of the Vancouver health Department health professionals described as involved with:
a) Delivery of health education and health promotion;
b) Development of liaisons between home and school and health unit;
c) Provision of clinical services;
d) Membership in the health professional team.

**Role Set**

Health Professionals are described as interacting with:
- families of students;
- community health agencies;
- school personnel, teaching and non-teaching;
- administrators (school);
- family physicians;
- interprofessional health team;
- school board team.

**Examples**

**Social Role**

Physician: The Physician fulfills an advocacy role on behalf of groups of children and case advocacy on behalf of the individual child.

(Marshall, 1982, page 64)

**Job Description**

Registered Nurse: Functions (selected): Screen records and consult with students and school personnel about health needs and health assessments.

(Marshall, 1982, page 69)

**Role Set**

Nutritionist - participates in Augmented School-Based team meetings as required.

(Marshall, 1982, page 62)
4.7.3 **Categories II and III Combined** (see Table XII)

Category III's (End Product) pattern display indicates a majority of activity falling within the diagnosis and treatment of the physical domain of health. Physical health appears to dominate with a predominance of activities related to this area. Mental health activities are next in the pattern display.

Category II's (Person Responsible) pattern display indicates a primary emphasis on the role of the nurse as the primary health care worker in the school. This appears to be consistent with the highlighted statement that appears in this document which states:

> The nurse is the key Vancouver Health Department worker in the school and is involved in the activities of all components.

*(Marshall, 1982, page 20)*

The second most referenced health care worker in the school is the school physician.

In summary, the findings of the documentary analysis reveal an extensive and complex composite of the school health programme that heretofore received little attention in the literature. An extended discussion of some possible interpretations and implications of these findings is contained in Chapter V.
<table>
<thead>
<tr>
<th>References indicating activity in:</th>
<th>No. References</th>
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<tbody>
<tr>
<td>Care of Sick/Injured Child</td>
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<td>Health Education</td>
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<td>Nutrition</td>
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<td>(Immunization)</td>
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<td>(General)</td>
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<td>Health Protection</td>
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<tr>
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<td>Social Work Consultant</td>
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<td>Psychiatrist</td>
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<td>Director Prevention Programs</td>
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<td>All Health Personnel</td>
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<td>Personnel Division</td>
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<tr>
<td>Occupational Therapist</td>
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<td>Clerk</td>
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<td>Nutritionist</td>
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<tr>
<td>Audiologist</td>
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<tr>
<td>Volunteers</td>
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</tr>
<tr>
<td>Speech/Hearing Specialists</td>
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<td>C.D.A. Group</td>
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<td>Dentist</td>
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</table>
Examples

Physical

(Prevention/Diagnosis/Treatment)

First Aid, Emergency Care (Persons responsible are):

Community Health Nurse, Registered Nurse, School Physician.

Mental Health

Mental Health, Medication Monitoring, Interpretation, Review of Diagnosis (Person listed as responsible):

Psychiatrist.

Social

No references

4.8 Summary of the Findings

A summary of the teacher and health professional documents is given in Table XIII for the purpose of contrasting these communities in Categories I and III in which numerical tabulations were compiled. As the summary indicates, the science teacher documents display an emphasis on the physical domain of health related teaching. Physical education documents also indicate a preoccupation with physical factors in health teaching. In contrast, the guidance teacher documents stressed the mental domains of health. The health professional data indicates an emphasis on the physical aspects of health that is similar in both documents.

The following patterns, while not tabulated, were indicated in Category II. The teacher groups interpreted roles within the context of their subject specialities while the health professionals interpreted roles within their specific medical
models. There was little acknowledgement by either community for the other community's role.

### TABLE XIII

Summary Tabulation of Categories I and III

#### Teacher Documents

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<thead>
<tr>
<th></th>
<th>Science</th>
<th>Physical Educ.</th>
<th>Guidance</th>
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#### Health Professional Documents

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<th>Vancouver Health Dept.</th>
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</table>
CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The school health programme is a unique and complex area of teaching and work activity within the overall curricula of the school. While this programme is educationally situated within the setting of the school, the focus also encompasses the interests of two distinctly different professional communities, that of teachers and health professionals. The programme in British Columbia is distinct from other areas of the school's teaching and work activities in that it involves both the Ministry of Health and the Ministry of Education. The situation that presently exists in which two distinctly different professional communities work together to make up the overall programme, is an area of study that has been virtually ignored by previous researchers. This is particularly true for the Canadian secondary school. The lack of information is especially evident in the area of health teaching that appears within the formally prescribed guidelines for the teaching disciplines of science, physical education and guidance.

Because there is little information available as to the prescribed role of the teacher as health educator, it would be possible for the impression to exist that all school health programming is directed by the Ministry of Health. For example, at the secondary level in the Province of British Columbia where this study was conducted, documents entitled "The School Health
Programme" are produced and distributed by the Ministry of Health. "The School Health Programme" documents are designed for use by health professionals who work in the school system. These documents do not include guidelines for the teacher who may also be involved in the health teaching curriculum of the school. In addition, the Ministry of Health documents do not cross-reference any of the many listings of health related teaching possibilities that were found in this study within the curriculum guidelines for science, physical education, and guidance. On closer inspection of this programme it would appear that the published literature to date has not looked at the complete picture; a picture that should include the documented and officially prescribed work and teaching of both professional communities.

The intent to find, analyze, and explicate the larger picture of the school health programme has been a central focus of the study. In displaying the broader mosaic of this programme the researcher has been concerned with finding and mapping the existence of hidden health curricula of the teachers and also exploring to a similar degree the explicit health curriculum of the health professionals. An equally important concern was the necessity to look at the two professional communities who make up a substantial portion of the programme at the secondary level and to investigate the different ways these documents have displayed social constructions of reality.

Briefly summarized, this study has pursued the following areas of research interests. Firstly, the research work involved a systematic attempt to look for the existence of a
hidden or implicit curriculum that is found within the secondary teaching areas of science, physical education and guidance. A parallel search was also conducted on the explicit curriculum documents of the health professionals who interact in this overall programme. The three research questions that were answered in the findings of this study and discussed in detail in this chapter are:

1) What do these documents display as being health related objectives, goals, rationales and beliefs of teachers and health professionals?

2) Who is specified in the documents as responsible for the health related teaching and work activity and additionally, what are the implicit or explicit role definitions of those delegated as being responsible?

3) How do the documents describe the means by which the school health programme should reach the intended recipient in the school? In particular, what kinds of teaching or work activity are specified?

Secondly, this study has used a sociological framework as a basis for the data analysis and as the basis for explicating certain facets of the problem studied. The theories utilized represent a compilation of the selected viewpoints of Holzner and Marx (1979), Schutz (1962, 1967) and Smith (1974) that are related to the social construction of knowledge. The findings of this study, particularly those related to the social construction of this programme as revealed through the documents analyzed from the communities of teachers and health professionals, are discussed in this chapter. These diverse
communities are examined through theoretical perspectives as follows:

1. Frames of reference, that take into account the communities' views in which the following are displayed:
   a) taken-for-granted assumptions,
   b) specialized language as preferential symbol system,
   c) analytical devices with which the communities' work proceeds;

2. Specialized knowledge that provides a basis for specialization and ultimately the legitimacy of the right and responsibility to practice and apply the specialized work of the community;

3. Boundaries of knowledge ownership and the power that is implied within domains of knowledge as particular groups lay claims to areas of knowledge.

This chapter discusses at length the patterns of findings about health that the documents display. The resulting patterns indicate an overall programme of school health that is both complex and interwoven within the milieu of the secondary school.

5.2 The Existence of Health Teaching in the Documents

Chapter V discusses the findings of the analysis that are related to the existence of health related work and teaching within the curricula of science, physical education, guidance, and the health professionals. The hidden curriculum of the teachers is initially discussed as a central finding of this study. As previously outlined, the Ministry of Health documents
which reference "The School Health Programme" provide extensive, detailed descriptions of the work of the health professional in school health programmes. There is no parallel document that is provided for the secondary teacher who wishes to pursue health teaching within a particular teaching discipline. The hidden curriculum of health teaching in the subjects of science, physical education, and guidance, while clearly embedded in these curriculum guides is a curriculum that is both obscure and complex.

5.3 The Hidden Curriculum

5.3.1 Science

The four goals of science do not provide clues about the possible involvement of the science teacher in health teaching. The goals are directed toward a scientific approach or scientific way of seeing and interpreting the world. For example, science is described as providing opportunities for the students to develop positive science attitudes, skills and processes of science; creative, critical and formal thinking abilities; and to increase scientific knowledge. The observation that:

Physiological changes leading to adulthood and increase in self-awareness form a natural prologue to formal examination of human body, health and nutritional issues.

(B.C.M.E., 1983, page 3)

is the only health statement found in Category I. The rich and extensive cataloging of health teaching possibilities occurs later in Category II and III (Combined) and in Category III
(Topic integration).

An overlay of the Health Dimension Classification Scheme reveals the following patterns. Essential teaching topics under the physical domain of health form the major content teaching focus. Body concept topics such as "measure some body functions" and "describe nerve functions...." (B.C.M.E., 1983, Teacher Reference Chart) are examples of the more prevalent physical classifications. Drugs and nutrition are next in order of ranking, with safety topics last. The optional topics display a similar rank order (in decreasing importance) of body topics, prevention, diagnosis, treatment, drugs, and safety. The scope and sequence of content shows that drug teaching references are confined to Grade 8; Nutrition to Grade 9; Prevention, Diagnosis and Treatment topics (optional) are listed solely at Grade 10. This one time only approach is not found in the teaching topic areas of body and safety where a more integrated scope and sequence occurs. Mental health teaching topics are absent as are Social (Interpersonal) topics. Social (Lifestyle) references display an integrated pattern of topic dispersal with each grade having one or more references indicated. With the exception of the clustering of drug topics at Grade 8 and nutrition at Grade 9 the health topic display pattern is more evenly distributed.

A unique example of the way this document integrates health topics into the overall teaching guidelines is found in the section of Suggested Topic Integration. The curriculum guide provides an extensive listing of possible topic integration for the science teacher. These curriculum topic integration
Suggestions are interspersed throughout the document. Health topics which reflect and repeat essential/optional Category II and III data patterns are embedded within the topic integration listings. Examples of this recommended integration are:

Suggestions for Integration:
Life Functions integrates with: Changes in matter, relate body systems, nutrients and food additives to symbols and reactions.

(B.C.M.E., 1983, page 66)

The science document was the only one of the three teacher curriculum guides to list extensively this kind of topic integration in which the non-health content areas are suggested for integration with the health related Life Functions sections of the curriculum. When viewed as a whole the science document displays an extensive amount of health teaching possibilities that are essentially hidden within the curriculum.

Having discussed the existence of a hidden curriculum of health teaching within the science document, it is important to also pursue some of the consequences of such a curriculum structure. First of all, the document is written in such a way that the health teaching areas have to be teased out of its pages. The where, what and how of health teaching possibilities are not readily accessible. For example, there is no section labelled health education or the teaching of health concepts in the science classroom. The closest approximation to such a label is the content area "Life Function". In this study, by means of a broader definition of health accessed through the WHO definition (1978) and the Health Dimension Classification Scheme (Brumby, Garrard and Auman, 1985), other areas of health teaching possibilities in addition to those listed under "Life
Function" are found. For example, health teaching possibilities appear under such content areas as:

**Grade 8: Ecology and Resource Management**

(Student learning outcome of) demonstrate knowledge of biocides: health and environmental effects.

(B.C.M.E., 1983, Teacher Reference Chart)

**Grade 9: Changes in Matter**

(Student learning outcome of) demonstrate a concern for safety when using and storing household chemicals.

(B.C.M.E., 1983, Teacher Reference Chart)

Because this Junior Secondary Science Curriculum Guide is a primary source of both teaching guidelines and resource materials that are provided for the classroom teacher there appear to be several problems related to the construction of this manual. The fact that many health curriculum teaching possibilities are hidden within the document seems to send a message of low priority for this content area. The science teacher who wishes to teach health topics does not receive much in the way of clearly defined guidelines. The documentary patterns of health teaching that are displayed in the findings of this study required more effort and time to locate than can be expected of the classroom teacher who may wish to find and use the health education embedded content areas of this curriculum. Some specific recommendations about possible ways of remedying this situation are discussed later in this chapter.

Category II of the science document provides further evidence for the claim that health teaching, while primarily a hidden facet of this curriculum, is possible within these prescribed guidelines. The learning outcomes, previously
referred to in Categories II and III (Combined), are discussed as:

It is expected that the essential learning outcomes will be included in the program for all students while optional learning outcomes will be selected by the teacher to extend student learning.

(B.C.M.E., 1983, Teacher Reference Chart)

The Role Set classification in which data are displayed under the "Possible Activities" section of the guide portrays the science teacher as interacting with various health professionals who are all "invited" into the classroom to discuss topics such as "high blood pressure", "eating habits", and "artificial respiration". The Social Role division of Category II appears to mirror the previously stated goals of this document. The role of science is described as offering the students a particularly suitable scientific perspective from which to understand their changing selves and the world around them.

5.3.2 Physical Education

The Physical Education curriculum document tells us that its goals and learning outcomes "have incorporated and extended those of Goal M" (B.C.M.E., 1977). The four goals of the Secondary Physical Education programme can be summarized as follows:

Goal A - developing and maintaining positive personal attributes, interpersonal relationships and positive attitudes towards participation in physical activity;
Goal B - developing knowledge, understanding of factors in competence and appreciation of physical activity;
Goal C - developing efficient, effective motor skills and applying them in many physical situations;
Goal D - developing and maintaining physical fitness.

In analyzing these goal statements the following patterns emerge. All four goals are classified under the Health Dimension Scheme as follows. Goal A is listed under the mental domain and also the social (Interpersonal) classification. Goals B, C and D belong to the physical (Body) classification of health dimensions. Additionally, Category I of this document provides numerous examples of health-related objectives, rationales, philosophies and programme intentions. For example, the document broadly describes physical education as being:

...that portion of the educational process which utilizes physical activity as a primary means for stimulating mental-intellectual, social-emotional and physical-growth and development.

(B.C.M.E., 1977, page 1)

This statement is classified under all three major domains of health dimensions. "Health" statements are found under "program implications" such as:

"student needs to understand daily health practices regarding activity, nutrition and rest.

(B.C.M.E., 1977, page 3)

The term "good health habits" also appears. The document provides some learning objective guidelines that relate to health teaching under its "fitness" section. However, it does not provide guidelines for the "nutrition and rest" section of this Category I statement. The same criticism applies to the
statement "good health habits". The teacher is given various objectives to work toward in health related classroom teaching but little in the way of specific information as to how one goes about achieving them. References from the "Fitness Program", also referred to in this document as "Active Health", display a rich pattern of health education possibilities. Statements such as:

It is hoped that the Fitness program will encourage students to maintain exercise and nutritional patterns that will assist them in living a healthy life....

Fitness makes a very significant contribution to the total well-being of all students.

(B.C.M.E., 1980, page 125)

are examples of health teaching statements that appear in various parts of this document. With the exception of the "Fitness" section of this document, in which various student learning outcomes are listed as health related, the rest of the curriculum guide does not provide clear, concise guidelines on health teaching for the physical education teacher.

Category II of the Physical Education document provides the following information about health related guidelines concerning role. As a social role physical education is described as contributing to the total education of the student. Job description statements are all "fitness" related. This emphasis on "fitness" is consistent with the documentary patterns of emphasis in Category I and III. The "Fitness Program" is highlighted as a priority in that it:

should be integrated into the physical education curriculum and not taught as an isolated unit of instruction.

(B.C.M.E., 1980, page 125)
There is no role set indicated.

Category III of the Physical Education document displays a lengthy list of student learning outcomes that are categorized as end products of the teaching and work of this discipline. The tabulated data of health references in this category presents a profile of this subject area in which the majority of emphasis is on the physical domain with "fitness" being particularly emphasized. There is agreement between all categories of this document in that the concept of fitness appears as a priority teaching topic. Other patterns of interest in this document include the frequent use of such health related words as "cardiovascular" and the previously discussed emphasis on "fitness". The question of the hidden aspect of health education teaching is similar to the situation faced by the other teaching disciplines whose curriculum guidelines were surveyed for this study. Whereas there are numerous examples of the possibility of the physical education teacher also functioning as an active health educator, the document does not present an easily followed or interpreted guideline for this kind of teaching. As previously noted, the classroom teacher would be obliged to search out and reorganize much of the contents of this curriculum document in order to plan such a programme of health teaching.
5.3.3 Guidance

The five goals of the Guidance Programme display a pattern of emphasis on the mental and social domains of health. There are twice as many recorded references in Category I listed under mental as under physical. There is an emphasis on assisting the students to develop a personal, viable value system as well as decision making skills. The goals also stress the need for students to be aware of their own behaviour and that of others, to know possible choices for vocational and educational experiences as well as the importance of communication skills.

Category II findings related to role and health teaching reveal a document that is different from all the other documents surveyed. One of the indicators of dissimilarity is the lengthy discussion about role in this document. Most of the role and job description analysis can be characterized as findings of a cautionary language in this section. For example, the teacher is warned about:

- Particular care must be used....to see that embarassment is caused to neither student nor parent in pursuing what must be considered private, personal details.

- Most requests for information should give the student the option of not replying.

- The teacher should avoid placing himself in the position of attempting to impose a set of values from above.

(B.C.M.E., 1971, page 9)

The unusual aspects of role delineation in the guidance document are:

1) its tone of admonition;
2) the lengthy discussion of these concerns in the document;
3) the fact that none of the other documents, including those of the health professionals contain this kind of documentary discourse.

The guidelines pertaining to professional discretion appear to be particularly defined for this specific teaching discipline. This unusual facet of the document will be discussed further in the section of this chapter related to sociological interpretations of the findings.

An analysis of social role reveals certain unexplained ambiguities in this document. The curriculum guide states that guidance meets the needs of society and those of the secondary students. Parallel to this statement is the statement of social role, also referenced within the job description discourse, in which the reader is asked:

What should the public school be responsible for in terms of students' personal problems?

(B.C.M.E., 1971, page 2)

The document further states that:

The Department takes the view that the school has both the responsibility and the opportunity to make a significant contribution to the findings of solutions to these (drug) problems and urges all teachers, particularly those involved in guiding young people, to provide the kinds of educational experiences which will enable pupils to cope with such problems.

(B.C.M.E., 1971, page 5)

One interpretation of these statements, which will be explored more fully is that this particular group of teachers appears to be making a claim of ownership of the "drug problem/solution" area of expertise.
Role set analysis describes the guidance teacher as seeking:

interdisciplinary cooperation....(for) a less fragmented educational experience.

(B.C.M.E., 1971, page 4)

The guidance teacher also is advised to make use of invited guest speakers such as the public health nurse. Category III portrays the guidance teacher's health related teaching as weighted toward the mental and social domains. This is a pattern similar to that of Category I of this document. Under physical the emphasis is on the subset of (Drugs). The mental domain reflects a major emphasis on such topics as: risk-taking, decision-making and values. The social (Interpersonal) classification displays emphasis on communication skills. As was the case with the Science and Physical Education teacher, this curriculum document communicates more hidden health curriculum statements than explicit statements.

In summary, all three teacher groups whose documents were analyzed and compared in this study appear to display the following pattern in regards to this hidden curriculum of health related teaching. The Science document, while containing examples of health related teaching possibilities, appears to centrally focus on the scientific approach to the discipline through its on-going discourse about the skills, processes and knowledge that are scientifically based. Health teaching, as it appears in the science curriculum guidelines, displays an emphasis on the physical domain. The Physical Education document similarly focusses on the central activity of its discipline, the development and maintenance of optimal physical
activity for students. Where health teaching is referenced the major focus is on the physical domain and the concept of "fitness" appears as a teaching priority. The Guidance document appears to focus on the concept of "guidance" rather than the concept of "health" per se. Health related teaching in the guidance curriculum stresses the mental and social (interpersonal) aspects of the domain of health. All three teacher disciplines are involved in varying degrees with health related teaching. However, the process and the scope and sequence of this involvement with the teaching of health appears to be hidden rather than explicit.

5.3.4 Goal M: Guide to the Core Curriculum

Goal M contains a singular goal, as stated in the document:

To develop skills and knowledge for healthful living.

(B.C.M.E., 1977, page 32)

The document is of particular relevance to this study because it represents an officially prescribed view from the Ministry of Education, in 1977, as to the school's responsibility in pursuing this goal. The Guide to the Core Curriculum handbook from which Goal M was extracted clearly states that this document is intended to emphasize that core goals and learning outcomes are achieved and reinforced through the integration of various subjects or courses.

Analysis of this document using the Health Dimension Classification displays an emphasis on the physical domain. A social role for the school is implied as it is described as being responsible for:
developing skills and knowledge for healthful living.

(B.C.M.E., 1977, page 32)

The question of who should be responsible for this teaching is answered by the document as primarily involving teachers of physical education and guidance. At the Junior-Senior Secondary level these two teacher groups are described as having "a major responsibility" for health teaching. Science is referenced only under Outcome M.9, an outcome related to the teaching of function, structure and common disorders of the human body. This science reference is confined to "the biology units of Science 8". Studies in "poise, posture and mime" (Drama 8-10) are also included in specific role responsibilities for subject areas. Recreational activities, safety and first aid are referenced as content areas without specificity of teaching discipline. At the Senior Secondary level physical education and guidance are highlighted in reference to outcomes M.13 and M.14. These specific outcomes are classified under the mental and social (Interpersonal) domains and the general classification. The physical education and guidance teachers are singled out for their importance as health educators:

Physical Education and Guidance, because of the focus of their content and related activities, have a special responsibility regarding outcomes.

(B.C.M.E., 1977, page 33)

Science at the Senior Secondary level is not referenced as being health related in teaching focus. No role set is indicated in this document.
This document presents a subject listing that indicates the following patterns. Health related teaching occurs in Physical Education Grades 8-11; in Guidance Grades 10-11; in Science Grade 8; and in Drama Grades 8-10. Other areas of health teaching are listed as being: First Aid, Art, Music, Crafts, Sewing, Cooking and Industrial Education.

There are several conclusions that can be drawn from this document. First, the existence of Goal M in this document is significant. This document represents an officially prescribed view from a ministry that is directly responsible for the educational component of the work and teaching of the school. The fact that Goal M was included among the goals outlined for the overall curricula appears to lend weight to the claim that health teaching is officially recognized as occurring within various secondary school curricula. The Physical Education and Guidance references in Goal M bear some similarity to the findings of this study. The Science references under Goal M, however, are not similar. As previously discussed in Chapter IV, the Goal M document predates the revised Science curriculum that is analyzed in this thesis. However, the fact that the curriculum ignored health teaching that occurred in Science Grades 9-12 appears to be relevant to the overall discussion of this study. The authors of this Goal M document, by referring only to the biology units of Grade 8, have narrowly defined the scope and sequence of possible health teaching within Science. Furthermore, the role of the science teacher as health educator is portrayed as a position of minor importance when compared to that of the guidance and physical education teachers.
Another example of evidence of restricted boundaries for the scope and sequence of health teaching appear in the statements that Guidance 10 and 11 are listed to the exclusion of Guidance 8, 9 and 12. This analysis of the display of understandings about the existence of health teaching within Goal M does not agree with the findings of this study in which numerous examples of health teaching at the grade levels of 8, 9 and 10 for Secondary Guidance have been found. From the standpoint of all teacher disciplines discussed in this document, Physical Education is portrayed as the subject area in which health education is more likely to occur, with Grades 8 through 11 emphasized.

From the overall patterning that appears in this document there is little information given as to why certain grades and subject areas were considered to be health related and others excluded. Additionally, there is little discussion related to an underlying philosophy that provided guidance for the construction of this document. On the whole there are many questions that are raised by this document that do not appear to be satisfactorily answered. One of the more intriguing of these questions in found in core curriculum document under the heading Healthful Living:

A number of respondents to the draft core curriculum document expressed the opinion that enough emphasis was not given to physical and mental health. Compulsory daily physical education was suggested as were stress, self concept, and the addition to such topics as preparation for parenthood. The Ministry will be giving further consideration to the concerns raised and the basic question: "What is the responsibility of a public school system with respect to these matters?"

(B.C.M.E., 1977, page 5)
The question raised in the *Guide to the Core Curriculum* about the parameters of school responsibility is similar to that voiced in *Secondary School Curriculum Guide - Guidance*. The overall impression conveyed by these documents is that while there is a general concern about various student "problems", there is also an uncertainty as to what course the school should take in such matters.

In summary, the most important aspect of this document is the fact that it has been written and distributed as an official statement of policy from the Ministry of Education, Province of British Columbia, and that its Goal M clearly establishes a precedent for the existence and official sanctioning of health teaching within certain subject areas at the secondary school level. The document is also useful as a body of data that can be compared with the findings of this study. However, there are serious doubts that can be raised as to its usefulness to the teachers and school administrators. In particular, the same problems surface with this document as with the teacher curriculum guides in general. This document is notable in its lack of clearly defined health teaching directives. Generally it would be of little use to the classroom teacher who may wish to establish a programme of health teaching within a specific teaching discipline in the secondary school.
5.4 The Explicit Curriculum

5.4.1 Introduction

The documents discussed here represent the health professionals' curriculum documents for the school health programme. Both of these documents are referred to in this study as the explicit curriculum of this programme. They represent the clearly defined, comprehensive guidelines for a programme that has been established in the public schools of British Columbia for many decades. The use of the term explicit refers to the fact that the school health programme outlined in these documents is a precise body of health related work and teaching that is presented as the central specific aspect of the documents. There is no hidden aspect to this curriculum as has been the case for the teacher documents previously discussed. The two documents that represent the health professionals' curriculum in the school health programme are: Public Health Nursing Program for Children and the School Health Program Procedures Manual.

5.4.2 Public Health Nursing for Children

The first of the two health professional documents, Public Health Nursing for School Age Children, outlines eight objectives for the programme. All these objectives are health related, with major emphasis placed on the physical subset of prevention, diagnosis and treatment. The purpose of this programme is presented in global terms:
To promote a healthy lifestyle and facilitate the attainment of optimal health by school age children to enhance their learning capacity and lay the foundation for health in adult life.

(B.C.M.H., 1982, page 1)

There is an emphasis in this document on illness that distinguishes it from the previously discussed teacher documents. The objectives, that make up the major entries under Category I - Health Dimension Analysis, contain words such as "communicable disease", "specific diseases", "disorders", "impairment", "physical or emotional disease", "physical or emotional health problems". While the primary intent appears to be directed toward the attainment of wellness, the overall discussion of wellness is secondary to the discussion of illness. This is especially evident when the teacher documents are compared with this health document. This aspect of the wellness-illness continuum of health that is discussed in the documents will be pursued further under the sociological interpretation section of this chapter.

Category II of the Public Health Nursing for School Age Children document presents a concise, well-defined picture of the public health nurse as a promoter of a healthy lifestyle and health facilitator. The job description displays a public health professional who is officially sanctioned for this role by both the School Act and the Health Act. The document clearly defines the explicit role of this health professional as:

The primary health worker in the school is the public health nurse who is responsible for the coordination of health services provided by a multi-disciplinary team.

(B.C.M.H., 1982, page 1)
The specific job descriptions of this health professional are lengthy with many varied aspects of health service provisions outlined.

This health worker is involved in a long list of health care service activities. The majority of these involve direct clinical intervention of a health care nature. She is also described as a coordinator-consultant between the school, the public health service and the community. Her role subsumes that of a traditional registered nurse with additional public health qualifications. This role also assumes a variety of closely delineated administrative and facilitative functions as a specialist in school health. The role set for this health professional reflects the wide focus of her role descriptions generally in that she interacts on a broad basis with the school, the school health team, and the community related to the school as well as with her primary focus, the students.

The Category III - Health Dimension Classification reveals the following documentary patterns. The emphasis is weighted toward the physical subset of prevention, diagnosis and treatment domain as the area in which students receive a majority of the end products. Fourteen references are listed under this physical classification with only one statement that directly references mental health. Category III's emphasis on diagnosis, treatment and prevention appears to enhance the findings of Category I in which similar patterns occur. There are several phrases indicating active intervention that appear in this document. This situation provides a contrast to the discourse observed in the teacher documents. Category III
contains descriptors such as "nursing surveillance" and "investigation and nursing assessment". This document which indicates an active interventionist frame of reference does not contain any of the cautionary prescriptives found in the Guidance teacher document. One can assume that both of these professional communities work in areas of school settings in which professional discretion is required. However, the discretionary caution previously discussed under Guidance - Category II: Job Description is absent in this health professional document. This treatment of professional discretion as a component of role will be explored further in the sociological discussion.

5.4.3 Vancouver Health Department School Health Program Procedures Manual

The school aged child program goals and long term objectives are omnibus in this document. Adolescent goals cover the spectrum of reinforcing healthy behaviour patterns, discouraging negative ones in a range that includes driving, smoking, and alcohol as well as parenthood, chronic illness and aging. Category I - Health Classification Dimension displays a pattern of major emphasis on the physical with secondary emphasis on the mental domain. Category II describes roles of selected health professional workers who are the major health participants in the school programme. Under social role the documents describe health professionals who are officially and socially sanctioned providers of health services. The most lengthy role description is that of the physician. This role is
described as assuming a special position in the programme. The physician's role reflects an elite or special status with descriptions such as:

Because of their standing in the community and based on their medical training, knowledge and experience the Physicians accept leadership responsibility in securing appropriate conditions for the children in the school aged child population.

(Marshall, 1982, page 64)

This signification of role status stands in contrast to the document's description of the community health nurse. The nurse, although identified as being the primary Vancouver Health Department worker in the school, is not given the status that is ascribed to the school physician. Job descriptions vary. The list of functions designated for the physician is twice as lengthy as that of functions listed for the nurse. This situation reverses itself in Category II and III combined. In this section under "activities" the nurse is listed as being responsible for twice as many activities as the physician.

Generally, the health professionals in this document are described as involved with the following activities:

1) enhancing the health and learning environment of students;
2) providing a bridge between school health services and the community health care workers;
3) helping students and families to be more responsible for their own health;
4) providing effective, efficient utilization of educational and health manpower resources;
5) assessing health service outcomes;
6) providing adequate information, research and evaluation data for analysis and monitoring.

The role set is as diverse in its focus as that described under the Public Health Nursing Program for School Age Children document. Overall this health professional document presents a lengthy, detailed and specific display of role, particularly role in the area of job description.

However, as previously noted in the public health document, there is a notable omission of cautionary descriptors. Both documents display health professionals who are involved in sensitive, interpersonal activities for which there is an absence of discussion related to professional discretion. Another interesting facet of the two health professional documents, when compared with the teacher documents, concerns the contrasting picture of the health professional as the "invited" participant in the classroom. The teacher documents of science and guidance refer to the health professional as being "invited" into the classroom to discuss various topics that are set by the teacher. The Canadian Education Association's report (1976) on school health education, the Mutter (1985) report on Canadian school health programmes, and the Matters (1977) study of school health in British Columbia also refer to this image of the health professional as a guest of the teacher in the classroom. However, this invited, or outsider, image is not displayed to any degree in these health professional documents. Both the Public Health Nursing Program for School Aged Children document and the School Health Program Procedures Manual portray a health professional who appears
actively involved in classroom health teaching activities. For example, the Vancouver Health Department document describes health professional involvement under Job Function as including:

Develop education programs. Health oriented staff are to participate in planned classroom activities

(Marshall, 1982, page 31)

Community Health Nurse Functions: Instructing in the classroom, implementing and coordinating preventive health programs.

(Marshall, 1982, page 51)

In the first statement, use of the word "develop" appears to imply an active involvement by the health professional, whereas the wording "participate in planned classroom activities" is more passive in nature. However, the phrases "instructing in the classroom, implementing and coordinating" portray a positive sense of the health professional as an active, direct participant in the life of the classroom health programme. This particular area of the role of the health professional as classroom health educator is not well defined in the documents. A study by the author (Auman, 1983) that touched on this area of classroom role found that teachers and health professionals may have different understandings about this question of role. The teachers' point of view in this study was that they represented the discipline which knew best the methodology of teaching in the classroom and that health professionals, while clinically well prepared, had not received sufficient educational training to provide them with health teaching competencies required for classroom settings. The health professional point of view was that health education was best taught by the health professional who has acquired an extensive background in medical expertise.
Teachers were categorized as not being adequately prepared to teach about matters pertaining to the many complex areas of health education.

Overall this health professional document appears to reflect an unclear picture of role expectations in classroom health education settings. The few entries of cross referencing in relationship to the role of the health professional within the documents of the teachers does not provide a clear or easily delineated picture of what is actually expected here. This problematic area of role expectations and the boundaries of knowledge within the classroom setting will be discussed further in this chapter.

**Category II and III Combined**

This final section of analysis describes the end products received by the student and the assigned role responsibilities for these activities. The document divides the major areas of activities into: Care of the Sick or Injured Child; Mental Health; Health Education; Assessment; Nursing; Nutrition; Rehabilitation Therapy; Speech Pathology; Communicable Disease Control (Immunization); Communicable Disease Control (General); Health Promotion; Health Protection; and Dental Services. The major four areas of emphasis in activities are, in descending order: Mental Health, Health Education, Assessment, and Care of the Sick/Injured Child. In the corresponding area of the person responsible for these activities the community health nurse is the most frequently referenced with twice as many references to the nurse as to the school physician. This emphasis is consistent with the document's earlier statement that:
The nurse is the key Vancouver Health Department worker in the school.

(Marshall, 1982, page 20)

The total list of health professionals who make up this school health team is extensive. Whereas the section of the document that outlines the activities and persons responsible is lengthy, there appears to be little if any role and activity overlap. The general impression is that this document has provided concise direction as to what activities are provided and who is responsible for them at the clinical activity level. However, the role expectations for health professionals in classroom teaching situations is not well defined.

5.5 Summary of the Hidden and Explicit Curricula

This study makes the claim that there is extensive and varied documentary evidence of a secondary school health curriculum that is hidden within the teachers documents and explicit within the health professional documents. The general literature about school health programmes and the research studies aimed at investigating the Canadian school health programme, and specifically the studies by the Canadian Educational Association (1978), Muter (1982, 1985), Matters (1977), British Columbia Medical Association (1984), and Johnson (1986) have failed to reveal the amount of health work and teaching at the secondary level that this research has documented. The Science, Physical Education, and Guidance documents display a wide range of health teaching possibilities. The Guide to the Core Curriculum provides a specific, extensively written official sanction for health teaching to
occur within certain secondary core curriculum content areas. However, the teacher documents, while containing many examples of health education possibilities, lack concise guidelines or clear directives for the would be secondary level health educator.

The explicit curriculum of the school health programmes are defined in the health professional documents as displaying a health programme that is broadly and concisely outlined, with the exception of the health professional as classroom health educator. Overall, the health professional documents present a school health programme that is easily explicated and well detailed in its directives.

The general focus of the teacher groups displayed in the documents is on the work and teaching of the various subject area. Health education teaching, where it does occur, is displayed as a secondary concern. The general focus of the health professional is on the work of the school health programme, particularly in its directives toward the many varied and intricate health care activities that are performed by its community. The broad mosaic presented in these documents is that of a diverse health programme within the school that contains the work and teaching of both the secondary teachers in certain subject areas and the health professionals.
5.6 Theoretical Discussion

5.6.1 Introduction

The previously discussed findings of this study were constructed and analyzed by means of theoretically informed content analysis. The final stage of theoretically informed content analysis is the making of inferences about the findings. This section of the thesis concerns the process of inference construction; a process that is related to the sociology of knowledge theories that have guided the original utilization of theoretically informed content analysis. This methodology is discussed in detail in Chapter III. The methodology is based on selected theories from the sociology of knowledge. The sociological theorists in this area of specialization, whose writings are particularly relevant to this research are Holzner and Marx (1979), Schutz (1962, 1967) and Smith (1974).

The major focus of this section generally is on the epistemic communities of both the teachers and the health professionals and particularly on the findings of the analysis as they provide the basis for the final stage of inference making. Specifically, these findings are examined through the theoretical perspectives of the epistemic communities’ use of frames of reference, specialized knowledge, boundaries of knowledge and the implications of power that is related to knowledge ownership.
5.6.2 Epistemic Communities

A major focus of this study has been the intent to explore the influence of the epistemic communities of teachers and health professionals as they appear to have been documentarily constructed in these findings. Of particular interest to the researcher has been the various ways that these documents socially construct the overall school health programme. In describing the nature of the epistemic community Holzner and Marx (1979) have placed special emphasis on its use of frames of reference. They contend that the experiential foundation of the epistemic community's frames of reference may be a major point for the differentiation of communities. Frames of reference assist with conceptualization of problems and facilitate the discovery of possible solutions. A discussion of the key points within this concept of frames of reference will follow and the parallel areas of theories pertaining to specialized knowledge, knowledge boundaries and the notion of power that is implied by knowledge ownership will be pursued in the conclusion of this chapter.

5.6.3 Frames of Reference

5.6.3.1 Taken-For-Granted Assumptions

Taken-for-granted assumptions assist the community to develop a knowledge and belief framework from which its unique points of view and the ways by which it develops specific orientations about its work and relationships with other communities can be formulated. Many examples of taken-for-granted assumptions exist in the documents of this study.
The teacher documents display a number of diverse taken-for-granted assumptions. Beginning with the science documents, the objectives, goals and rationales of this community display assumptions about the taken-for-granted knowledge and beliefs that are shared by this community. There is no attempt to explain in this document what determines "scientific perspectives" or what constitutes the "skills and processes of science". The tacit understanding that appears here is that the community's base of knowledge has incorporated these understandings somewhere within the training process experienced by science teachers. There is also a taken-for-granted assumption, for example, that this "scientific perspective" is socially sanctioned as an acceptable perspective for the work of this community in school settings. This shared biographical understanding of the science teacher community about taken-for-granted assumptions is related to Schutz's (1967) notions of how we come to see and understand the world through our accumulated and shared experiences. There is a pervasive display of how the document defines this community of science teachers as using a "scientific perspective" to orient and define its work. An analysis of role and teaching topics provides further evidence of taken-for-granted assumptions. The curriculum document for Science, Grades 8-10, makes the assumptions that the teaching of "drug and nutrition" education are considered to be appropriate topics for inclusion within the general curriculum as well as appropriate work for this community. A parallel assumption implied in this curriculum guide is that the science teacher is a qualified professional who is capable of undertaking such
responsibilities.

The documents of the physical education teacher also display taken-for-granted assumptions. For example, the document portrays an assumption that it is socially desirable for students to:

   demonstrate a positive attitude toward physical activity.

   (B.C.M.E., 1980, page 4)

Similarly, under Category II, Social Role, the document states that:

   Fitness makes a very significant contribution to the total well-being of all students.

   (B.C.M.E., 1980, page 125)

As was the case of the previous statement, the assumption is that (fitness) physical education is a socially desirable aspect of the educational process.

Taken-for-granted assumptions in the Guidance document demonstrate a number of unique community perspectives that can be inferred from the findings. There is an unusual display of ambiguity on the part of this document's discussion of taken-for-granted assumptions about the role of the Guidance teacher as related to the role of the school in solving personal problems of the students. On the one hand we are told that Guidance fulfills a social role in meeting the needs of secondary students and in meeting needs of society in general. The curriculum guide also makes several statements about the serious nature of the drug problem and the need for teachers in Guidance teaching areas to:
provide the kinds of educational experiences which will enable students to cope with such problems.

(B.C.M.E., 1971, page 5)

However, the document questions what precisely the public school should be responsible for in regards to students' personal problems. These assumptions, that serious problems exist for secondary students, and that the school has expertise that should be used to assist in solving these problems is weighted against the assumptions that there is uncertainty about the school's role in this matter. Similar assumptions about the stated personal problems of students that are pertinent to intervention by the school and the lack of agreement as to how involved the school should be in such situations is also found in the Guide to the Core Curriculum document. Both documents present a lack of agreement in certain of their taken-for-granted assumptions that are not resolved within the general discourse.

An equally unique and taken-for-granted display of assumptions occurs in the extensive role discussion of the Guidance document. These role findings which were previously described as cautionary, present an extensive cataloguing of expected behaviour patterns for the guidance teacher that none of the other documents contain. This teacher is directed to take care to avoid embarassing the student in pursuing "private, personal details", and to avoid "imposing his own set of values", as well as "giving the student the option of not replying to questions". There are two basic assumptions here. One is that the guidance teacher requires special guidance about professional discretion that is essential to include in other
teacher curriculum guides. In comparison, the science teacher, while involved with teaching the section on legal and illegal use of drugs, receives none of these cautionary guidelines in the curriculum guide. The other taken-for-granted assumption displayed by this community's document is that, while there is uncertainty as to the degree or limits to the school's responsibility for student's personal problems, there are specific knowledge domains such as drug education that are assumed to be an expected component of the Guidance curriculum. Statements such as:

It is becoming increasingly evident that young people in public schools are by no means immune and it is not an exaggeration to describe them as the 'population at risk' when considering the problems of drug dependence.

(B.C.M.E., 1971, page 5)

are indicative of this focus. Additionally, there is a parallel taken-for-granted assumption displayed in the document that both this community and society in general recognizes the ability of the guidance teacher to be involved with a variety of personal problem solving situations in school settings.

The analysis from Goal M of the Guide to the Core Curriculum tends to confirm the assumptions previously discussed for the teacher groups in that these three teaching disciplines are all described to some degree as being health work and teaching related communities. However, the assumption implied in Goal M is that physical education and guidance assume a greater degree of health teaching "responsibility" than is the case of the science teacher.
The health professional documents present an equally intriguing facet of taken-for-granted assumptions that are documentarily ascribed to this community. As previously discussed, the curriculum of this professional group is explicit, rather than hidden, as was the finding for the teacher documents. The taken-for-granted assumption that underlies the community's documents is that the work of this community in school health programmes is both socially sanctioned and socially desirable as an appropriate activity within the school. We are told in these documents that the work of this community is authorized by both the School Act and the Health Act. Unlike the assumptions about the need for professional discretion within its curriculum guidelines, as was revealed in the Guidance analysis, these health professional documents do not contain this concern. There are several speculations that can be made about this omission. The first is that it could be assumed that all health professionals have received previous training that has addressed the need for professional discretion. Therefore, they do not require reminding. Secondly, it is possible that the unique medical model basis of this community may reinforce the assumption that there is a right to, under socially sanctioned conditions, ask the embarrassing questions and pursue personal, private details, that was not sanctioned for the guidance teacher. This notable difference between the guidance teacher and health professional role exists in these documents despite the fact that the health professional is most probably involved in many potentially sensitive situations. For example, the community health nurse
is responsible for keeping "surveillance" records on students with a history of communicable diseases, the procedure guide also contains a one page description of managing the problem of head lice in the school. Additionally the nurse is referenced as assisting students with emotional problems. All of these areas may involve potentially embarrassing situations for the student. In addition, they indicate specific situations in the school health programme where personal and private details of students would most likely be pursued. However, the taken-for-granted assumptions in the guidance and health professional documents display diverse understandings about the necessity to documentarily specify professional discretionary behaviour.

5.6.3.2 Specialized Languages

A second dimension of the use of frames-of-reference by which the community builds its experiential base is through its use of specialized language as a preferential symbol system. The teacher documents display three specialized language examples that represent uniquely different areas of teaching. The science teacher document uses the language of science. There is discourse about the scientific perspective of the knowledge used. For example, under Life Functions the student will:

investigate scientifically the limitations of the senses.

(B.C.M.E., 1983, Teacher Reference Chart)

The physical education teacher documents use terminology from the community, such as:
Students should develop an understanding of movement principles including concepts related to body mechanics and safety, such as integrating time, weight and space in a successful volleyball spike.

(B.C.M.E., 1983, page 4)

Guidance uses the language of its community to construct this goal:

To assist the student in understanding the place of values in different societies and in identifying those which will help him develop a personal, viable value system.

(B.C.M.E., 1971, page 3)

The teacher documents contain very little in the way of illness statements. The language is essentially one of wellness orientation rather than a focus on the concept of illness. Specialized language for the health professional presents a significant contrast to that of the teachers. Within these health professional documents there is an orientation toward the concept of illness. Discourse of the community in the documents includes words such as "communicable disease, specific diseases, disorders, impairment, physical or emotional disease, physical or emotional health problems". The Public Health Nursing Program for School Age Children, for example, cites activities of the programme as including:

(to) initiate and maintain appropriate records, e.g. Health Surveillance Registry, Medical Alert and Chronic Disability Cards, Problem Oriented Record.

(B.C.M.H., 1982, page 4)

The health professional documents generally display the specialized language of medicine as its pervasive mode of discourse.
5.6.3.3 Analytical Devices

The last of the three subdivisions of frames-of-reference discussed by Holzner and Marx (1979) is that of the analytical devices with which the work of the community proceeds. This facet of the community's orientation to its work includes a variety of approaches. For example, one device that all the communities of this study make use of is the categorization of knowledge. The science teacher uses the processed knowledge of the community that has determined for Science, Grades 8-10, such categories as: "Ecology and Resource Management", "Life Functions" and "Changes in Matter". The physical education teacher works with a similar notion of categorization as illustrated by the teaching topic categories of: "Fitness or Active Health", "Dance", and "Team Sports". Guidance pursues its own categorization of work orientation by its attending to "Value Clarification", "Communication Skills", and "Vocational Choices".

Examples of these analytical devices of classification are equally numerous within the health professional documents. These examples include categories labelled "Crisis Intervention" and "Communicable Disease Control". Another aspect of analytical device use by these communities that assists with the explication of the findings of this study is the community's sense of a problem and how solutions to problems are conceptualized. For the science teacher the document displays a contextual framework of problems that is related to the "scientific perspective". Problems appear to be constituted as framed within this particular orientation of the community. For
example, the presentation of legal and illegal drugs as a teaching topic for Grade 8 Science displays an orientation that is more clinical in its approach than that found in the Guidance document's treatment of the drug topic. Science students experience this area of learning through such methods as identifying and classifying drugs. The Guidance approach to the topic is through a counselling perspective that is "value clarification" focused. The Physical Education document frames the problem-solution with such statements as:

Students need to understand the reasons for good health habits and the problems that may be faced during early teen and adulthood years.

(B.C.M.E., 1980, page 2)

The Guidance documents present many variations on the theme of problem-solution. For example, the document states:

The Department takes the view that the school has both the responsibility and the opportunity to make a significant contribution to the findings of solutions to these (drug) problems and urges all teachers, particularly those involved in guiding young people to provide the kinds of educational experiences which will enable pupils to cope with such problems.

(B.C.M.E., 1971, page 5)

Health professional documents display a rich variety of such analytical devices that are related to this sense of the problem and its solution. Objective 7 of the Public Health Nursing for School Age Children document points out one problem as consisting of the need to:

identify...physical or emotional problems which may affect the performance or general well-being of the student....facilitate correction as solution to the problem.

(B.C.M.H., 1982, page 7)
Another example is found in the **School Health Program Procedures Manual** which refers to specific problems areas of "sexually transmitted diseases", "suicide", "accidents", and "alcoholism - drug dependency". Generalized school aged programme goals that are implied as providing solutions to problems faced by this age groups include:

To reinforce healthy behaviour patterns and discourage negative ones.

(Marshall, 1982, page 2)

The writings of Berger and Luckman (1966) further clarify our understandings about the social construction of knowledge that exists in the data of this study in the form of constructs such as these analytical devices of the teachers and health professionals. These sociologists observed that the sociology of knowledge must concern itself with all the things that constitute knowledge within a given society. They conceptualize the sociology of knowledge more as a sociology of truth in which different perceptions of reality are represented as variations of truth. In this sense we as individuals and as group members construct the beliefs and understandings that we hold to be true. These constructions involve a complexity of interpretations and the end products belong to those who have constructed the reality.

All of these frames of reference, which are evident within the pages of the documents, assist in the task of understanding this social construction of the reality of the school health programme.
5.6.4 Specialized Knowledge

The specialized knowledge that is represented by these communities provides the basis for their specific claims to the specialization of that community. Ultimately this unique ownership of a particular knowledge domain assists with the claim of legitimacy of the right and responsibility to practice and apply the specialized work of this community. This study focusses on the specialized knowledge of the teaching community that is subdivided into areas of science, physical education and guidance, as well as the community of the health professionals.

The work of Blau and Scott (1962) helped to establish understandings that are useful in the explication of specialized knowledge domains that are represented in this study. They contend that specialized knowledge provides the framework from which the knowledge specialist, such as the science teacher emerges. This development of specialization then facilitates the establishment of expertise. Their theories of specialized knowledge are also predicated on the understanding that professionals subscribe to commonly understood and practiced professional principles. These principles include the following understandings. First, that professional decisions and actions are based on universal criteria. A mastery of the body of knowledge represented by the professional community and the acquiring of related skills necessitates some form of specialized training. Second, professionalization as evidenced in the epistemic communities of health professionals and teachers, assumes the dimensions of professional expertise. The health professional or teacher is understood as being a trained
expert who is qualified to deal with specific problems within a limited and socially recognized boundary. We do not, for example, expect the community health nurse to be qualified to teach classes in physical education, nor do we recognize the science teacher as possessing skills that are similar to those demonstrated by the dental hygienist in her work in school settings. Specialization, both in terms of the special knowledge base and the professional bonding that ties the community together, provides the key to expertise. Understandings about specialized knowledge appear as tacit assumptions in these documents. It is part of our everyday, common-sense knowledge about the structure and meaning of these epistemic communities which make up our world that Schutz (1962, 1967) has discussed. As part of our everyday understandings about these communities we have acquired a way of viewing such communities. We have come to assume that certain kinds of knowledge acquisition, production and dissemination belongs to particular groups that have claimed expertise and the right to practice knowledge in specific areas. The science teacher, for example, represents a specialized area of knowledge that has evolved over a long period of time. Training for the science teacher is community specific. An ownership of knowledge helps to establish the recognition of expertise. The legitimacy of this knowledge ownership and the right to practice it appears as a given within the document. Similarly, for the health professional, the ownership of the special knowledge within the various areas represented in these documents is also tied to our understanding and recognition of the expert who practices it.
The documents tell us that the work of this community has been established by the School Act and the Health Act. However, even without this documented acknowledgement of social approval we, as socialized, adult members of a North American culture, would probably have acquired this knowledge previously. Part of our accumulated understandings of the school health programme has been our awareness that health professionals' involvement in the work of the school has been a socially sanctioned and widely accepted aspect of the overall structure of the public school system for many decades.

The concluding theoretical perspective to be used in examining the findings of this study are the concepts of knowledge boundaries and the power that is implied within domains of knowledge as particular groups lay claims to specific areas of knowledge.

5.6.5 Knowledge Boundaries

The documents analyzed for this study have revealed complex and unique boundaries of knowledge pertaining to health work and teaching within the secondary school. In his writings as an educational sociologist, Musgrave (1977) observed that in many school situations the boundaries are often blurred. He further stated that boundaries within these settings are often poorly defined because our understandings and use of this term "boundary" has been applied in a haphazard manner. The result of all this is that little attention has been focussed on the actual problematic nature of organizational boundaries. Two of the central documents of this research discuss such a problem
within their documentary discourse. Goal M of the Guide to the Core Curriculum raises the issue of who is to be responsible for attending to the personal problems of students. A similar concern is raised with the Guidance document. In both instances there are more questions raised than answered about boundaries of knowledge that frame the setting for role responsibility and areas of teaching. As previously discussed, Goal M places the teaching of health within the prescribed boundaries primarily of Physical Education 8-11; Guidance 10-11 and Science 8. Here the boundaries of health teaching clearly exclude such areas as Guidance 8-9 and Science 9-10, although further investigation would reveal that health teaching does occur in these areas.

Balog (1981) in writing about unclear and problematic situations of knowledge boundaries has stated that the concept of health in particular has traditionally had no agreed upon boundary. He further contended that this problem of boundary is a sociological phenomena in that health as a concept is a human construct. He stated that this construct is created in a complex, interactive fashion which takes into account both individual and group cultural values, social norms and intricate belief systems. The creation of the school health programme by these two communities appears to have taken a developmental course similar to that described by Balog. For example, these community documents display ample proof of cultural values about health. The inclusion of Goal M, a goal whose aim appears to be that of promoting health teaching as a valued activity in the school setting, signifies a cultural value that is socially prescribed and promoted. Similarly, social norms appear in the
data that indicate the existence of an intricate norm construction. For example, the *School Health Program Procedures Manual* refers to their community's concern about:

social behaviour problems with an emphasis on legal definition of 'deliquency'.

(Marshall, 1982, page 3)

Finally, the notion of intricate belief systems are also embedded in the data. The guidance community displays a belief pattern about "values" that is specific to this particular document. Beliefs about "values" teaching are discussed at length. The student is described as developing an individual "method of attack" on value problems and this student is expected to "acquire his own set of values through interaction with other students". Intricate sets of beliefs appear to flow through such a discussion. The following beliefs appear to be implied:

1) values are important;
2) values should not be imposed by others, but rather developed by the student in constructive interaction with others;
3) value clarification is a socially accepted and desired activity to be included in the school curricula.

The science documents, in contrast, displays belief systems about the scientific perspective and its usefulness to students in their attempt to understand themselves and their changing world. The physical education documents exhibit an intricate belief system that is predicated on the interrelationships between physical health and mental and social health. The health professional data appear to orient their understandings
by means of long established theories about such phenomena as communicable disease and mental illness. Additionally the tacit belief implied within the documents of this community is that these specialized knowledge areas are clearly within their boundary of expertise.

Overall there are intricate boundaries of knowledge that have been constructed within the pages of these documents. Health concepts appear and disappear within what can be described as uneven patterns of scope and sequence. "Drugs" are taught in Science 8 exclusively, "Nutrition" at Grade 9. While the concept of nutrition is discussed by the Physical Education document as falling within their boundary of knowledge ownership, it is excluded from the Guidance documents. The concept of teaching about disease is exclusively the domain of the health professional with the exception of "optional" teaching topics for the science teacher. The health professional data appears to claim ownership to what can be described as a medically focused approach to health care services. As previously discussed, the notion of the health professional as classroom health educator is poorly defined throughout all of the documents. The boundaries of demarcation between the health professional and the teacher regarding classroom health teaching are not adequately addressed in these documents. The findings related to the phenomena of boundaries appears to confirm the observations of Balog (1983) discussed above.
5.6.6 Knowledge Domains and Power

Holzner and Marx (1979) have described the concept of power as being an integral part of the epistemic community because it is a key element of all social interactions. Our individual and group experiences with the kinds of power that is represented by communities such as teachers and health professionals have framed the ways by which we see the world that Schutz (1967) described as biographical understandings.

The work of this study in exploring and explicating such knowledge domains and the implications of power that appear within this phenomena of the school health programme has been accomplished by means of documentary analysis. The writings of Smith (1974) have been useful in providing a theoretical basis for the use of documentary analysis as a way of providing insight into the communities' constructions of social reality. Smith has observed that our understanding of contemporary society is very much mediated to us by the use of various kinds of documents. This study also claims that documents such as those representing the officially prescribed curricula of teachers and health professionals provide evidence of unique belief structures, values and norms that may not be readily accessible elsewhere. Additionally, these documents display the specialized domains of knowledge and the implied domains of power that are related to specialized knowledge claims.

Smith has written that the relationship we establish with others in society is essentially mediated by the rule of social organizations. Knowledge in this framework is viewed as ideological in that social organizations preserve the concepts
and the descriptive means that represent the world as it is for those who rule it rather than for those who are ruled. In terms of the phenomena studied here, Smith's theory is interpreted in the following way. The kinds of knowledge represented in this school health programme are in a sense ideological because the communities of teachers and health professionals have preserved their own concepts and the descriptive means by which the programme is represented. This presentation of community concepts and descriptive means of presentation appear to be reflected in the broad mosaic of these documents. Furthermore, the writers of these documents appear to have constructed a programme of school health in which it can be argued that both communities claim certain facets of ownership.

This situation of knowledge ownership and implicit power creates an educational dilemma. The school health programme, while representing different epistemic communities, contains the problematic question of what precisely should be the role of the school in areas of students' needs that are health related. As previously discussed, the question of health knowledge and the domain of ownership is often unclear in the documents. Although various claims to knowledge ownership exist within these documents, there may be future claims that are yet to be established. For example, the B.C.M.A. (1984) study on the status of school health education in British Columbia has strongly recommended the development and implementation, with leadership and direction from the health professional community, of a separate and mandatory health education curriculum for Grades K-12. If this were to occur the present structure of the
school health programme would undergo a major transformation with a corresponding change in knowledge ownership and power. At present the documents appear to provide knowledge ownership claims for both communities. The health professional ownership and implied power base is more explicitly stated than is the case for the teachers. The argument of Smith (1979) that has been pursued within this research study concerns both the documentation of social reality and the understandings of power and ideology that are implicit within certain documents. The writings of three educational sociologists, Phillips (1981) and Mercer and Covey (1980) are included in this discussion for the purpose of further illuminating the sociology of knowledge perspectives of Smith (1974).

Phillips (1981) proposed several basic assumptions about schools that are pertinent to school health programmes generally. His first assumption is divided into two statements of belief about organizational contexts. Firstly, he suggested that schools, as organizations, operate within specific value and action contexts. Secondly, his notion of schools was that their social order exists as a creation of interrelationships within and between relationships and conditions, from both an internal and external perspective.

The writings of Phillips (1981) concerning value and action contexts are relevant to the phenomenon of health teaching and work tasks in schools that has been studied in this thesis. As previously discussed, "healthful living" as a valued goal and an activity to be entered into within the context of the school has been precisely outlined, in the teacher documents, as a goal
(Goal M) of the Guide to the Core Curriculum. Similarly, health work and teaching was also found to be documented within the health professional's curricula as both valued and acted upon. From an ideological standpoint, both of these communities provide extensive documentary evidence as to what is recorded as being their right and obligation to this area of work and teaching within the setting of the school. The ideological message implied within both communities' documents is that there is both a perceived need and an obligation for some kind of health related work and teaching to occur within the school.

The second part of Phillips'(1981) first assumption concerned the issue of social order and relationships in school settings which is interpreted in this study as a question of power. The internal and external relationships referred to in this assumption are implicit within the documents of both communities. Both communities have been established within the context of separate, autonomous ministries. In British Columbia, the work and teaching of health in schools that is carried out by the teacher proceeds under the auspices of the School Act. The work and teaching of the health professionals in the school proceeds under the mandate of both the School Act and the Health Act. However, there are implicit inequalities of power pertaining to ownership and authority to practice health work and teaching that appear as givens within these documents. As previously discussed, the health professional documents are the only group of documents in which the descriptor "School Health Program" appears. The extent of discussion and directions for the work and teaching of health in school
settings is a primary focus of discourse in the health documents and a secondary issue within the teacher documents.

Parallel to the situation of power contexts that have been raised by Phillips (1981) and within the writings of Smith (1974), are the observations of Mercer and Covey (1980). These writers, in addressing the work of educational conflict sociologists, made the following salient points. They generally described this kind of research inquiry as involving the ways by which power relationships affect the educational process, observing that:

....the balance of power among individuals and groups is in a constant state of alteration, resulting in an equally constant social instability. The social organization of a society means that power will necessarily be distributed unequally, thus the powerful exercise and determine constraint.

(Mercer and Covey, 1980, pages 42-43)

The phenomena of uneven power distribution and the exercise and determination of constraint by the powerful may account for some of the discrepancies that were found to exist between the documentation of the teacher and the health professional communities. For example, as previously discussed, the guidance teacher document contains an extensive amount of cautionary discretion guidelines for the teacher that are not found within the health professional documents. There are several speculations that can be offered as to why this has occurred. One possibility that relates to the position stated by Smith (1974), Phillips (1981) and Mercer and Covey (1980) is that these power relationships are not equal. The health professional, because of their unique position as health specialists, may be viewed as having more power to question and
treat students in potentially embarrassing or sensitive situations. Additionally, there may be an implicit understanding on the part of society that it is the right and obligation of the health professional to pursue these difficult areas of health work and teaching.

It may also be that certain institutions provide more protective armour for the purpose of shielding its workers. The public health department, for example, may provide more perceived protection for its workers in sensitive areas of health work and teaching that is unstated in these data. Phillips (1981) touched on this area in his second assumption about schools and social order when he stated that:

Schools as organizations tend to be successful in reconciling a number of contradictory demands or they develop responses or protective devices for insulation against some of the contradictions confronted.

(Phillips, 1981, pages 113-114)

The cautionary guidelines for this guidance teacher would appear to be a protective device for both the teacher and the ministry. Another protective device that may be attributed to this same ministry is the placing of the more sensitive topics for teaching, such as disease and knowledge of principles of contraception, within the "optional" teaching category for the science teacher. A further example of a protective response or device is found in the statement that appears both in the Guide to the Core Curriculum and in the Secondary Guidance Curriculum Guide. In these instances the reader is asked what the public school should be responsible for in terms of students' personal problems. This kind of question does not appear within the health professional documents. A possible reason for these
differences may be that there is an explicit, common understanding within our society that a majority of health issues, including those of "student's personal problems" may be interpreted as subsumed under the task definition of the health professional. The power of the guidance teacher to claim and exercise an equal amount of health work and teaching ownership in this area may be less than that of the health professional. Additionally, the fact that both of these teacher documents contain this query to the reader would appear to signify an ambiguity and lack of direction as to the precise role and boundaries of the school in these matters. The answer to this question is not supplied in these documents, providing a further form of protection for the curriculum writers.

In summary, documents such as these frequently display a world of social reality that is difficult to access. They often raise questions without supplying answers. However, the documentation of institutional positions, roles and end products of these communities allows us to see facets of this social reality that may otherwise go unnoticed.

5.7 The Relevance of this Study to the Practice of Health Education

School health programmes have existed for many decades in North America. While the research literature about school health has focussed on various aspects of these programmes, it has failed to display their complexity and the meanings of that complexity. There are no other programmes in the school in which such diverse epistemic communities exist.
This study has been directed toward displaying the unique characteristics of the programme from a documentary perspective and toward correcting the lack of understanding about this programme that has existed. The data represents a complexity that reflects a microcosm of many understandings and many possibilities. If school health programmes are to be continued as viable entities, research into the epistemic diversity and the complexities of implicit and explicit curricula patterns must be pursued beyond the foundational beginnings of this study. It is hoped that other researchers will continue the task of tracking, analyzing and explicating this unique programme within the world of the school.

5.8 Suggestions for Further Research

Both the literature and the findings of this study indicate that many unknowns exist about this complex entity of the school health programme. This study provides an exploratory basis on which other studies of the programme could be based. Its findings suggest future questions that could be researched. Some possible areas that could be investigated are:

1) Are there similar areas of hidden curricula of health teaching that exist in the subjects of Home Economics and Consumer Education?

2) What other epistemically differentiated communities of professionals exist in the setting of the school that could be researched in a similar fashion?

3) How are these curricula in which health teaching exists implemented in the classroom setting?
4) In addition to the teaching of health concepts that was explored in this study, what other concepts are taught in school settings where similar issues of knowledge boundaries and knowledge ownership exist?

5.9 Suggestions for Education

An extension of the discussion in this chapter is offered as suggestions about the findings that have particular relevance to the educators of teachers and health professionals, curriculum developers, the Ministries of Health and Education, and finally to the teachers and health educators who work within these programmes.

5.9.1 Suggestions for Educators of Teachers and Health Professionals

The following suggestions, based on this research, are made to educators of teachers and health professionals.

1) There is an on-going need to provide health education training for teachers and health professionals both at the undergraduate and graduate levels. Optimally, this should occur as combined classes for teachers and health professionals. These classes could provide the pedagogical expertise required for health teaching as well as a place where interdisciplinary ideas about health education could be exchanged. Such specialized training, already a requirement for teacher certification in many states of the U.S., would serve to strengthen the overall programme of school health education.
2) Educators of teachers and health professionals at the university and college levels should establish an interdisciplinary dialogue to address the problematic situation of the school health programme, particularly from the need to better understand the diverse interests and concerns of the professional communities involved.

5.9.2 Suggestions for Curriculum Developers

The following suggestions, based on this research, are made to curriculum developers.

1) If the teaching of health is seen as a socially desirable and officially mandated activity within the school, the curriculum developers, particularly within the subject areas of Science, Physical Education and Guidance as well as Home Economics and Consumer Education, need to reassess the ways by which curricula is developed. At present there appears to be little direction or consensus from the curriculum developers as to the priority of health education within the school curricula.

2) A separate, mandated health education curriculum is not recommended at this time. The findings of this thesis indicate a documented sharing of health related work and teaching between the communities of science, physical education, and guidance teachers and health professionals. There currently exists a situation of specialized diversity. A separate curriculum for health could eliminate this present configuration of specialization. This complex area appears to require further research and dialogue between all parties
involved in the development and implementation of this programme before consideration should be given to such a curriculum being developed.

5.9.3 Suggestions for the Ministries of Health and Education

The following suggestions, based on this research, are made to the Ministries of Health and Education.

1) It is imperative that some degree of direction and consensus be reached about the future of school health programmes. There appears to have been little forward movement toward the optimalization of this programme. The good intentions and directives offered by Goal M of the Guide to the Core Curriculum do not appear to have been implemented within the present status of health education programmes in this province, particularly at the secondary level.

2) A review of the programme, based on a comprehensive research approach is recommended as an adjunctive measure to the previous recommendation.

5.9.4 Suggestions for Teachers and Health Educators

The following suggestions, based on this research, are made to teachers and health professionals.

1) The literature and the findings of this research study indicate a degree of confusion and ambiguity about school health programmes that directly affects the teacher and the health professional communities. It is important for these communities to better articulate their own unique perspectives about these school health programmes.
2) In conjunction with the previous recommendation it is suggested that teachers and health professionals work through their various organizations to direct and promote new directions for school health programmes.
References


