

**The Extent to Which Information Skills Have Been
Integrated Into Primary Curricula in British Columbia**

by

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ABSTRACT

This study addressed the question of whether or not information skills actually were being taught in context with curriculum units of study. The three questions it attempted to answer were:

1. To what extent have primary teachers and teacher-librarians integrated information skills into primary curriculum subjects in British Columbia?

2. Have teacher-librarian qualifications and/or hours of employment in a school library resource centre influenced the integration process?

3. Has the handbook, Primary Library Activities facilitated the integration of information skills into primary curricula?

Data collection included both a written questionnaire and oral telephone interviews. The sample for the study was purchasers of Primary Library Activities in the years 1984 and 1985. The responses to each question were tabulated and an analysis of variance was conducted to compare the variables in question two with other data.

The researcher found that:

- a majority of educators stated they were teaching information skills by integration.
- there was no relationship between the courses a teacher-librarian had completed and/or the hours he/she was employed in a school library resource centre and integration.
- a considerable difference was observable in the amount of flexible scheduling between schools located in rural areas and those located in cities.
- Primary Library Activities had been helpful in integrating information skills.

A limitation in this study was the small sample. The results of the study can be viewed as an indication only and need to be replicated by further research.

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Collections*

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CHAPTER I

THE PROBLEM

The intent of this study is to survey the extent to which information skills are taught to primary pupils in British Columbia by the method of integrating them with curriculum units of study. The Ministry of Education in the province advocates this approach. In a Ministry handbook, Sources and Resources the following statement is made concerning information services:

Teacher-librarians are educators who should know not only the methods of teaching, but also the most effective means of implementing those methods. This knowledge enables teacher-librarians to work in planning and developing units of study with other teachers, not providing for them simply the services and resources requested. (1978 p.1)

In addition to this policy statement the prescribed curriculum guides provide numerous entry points for information skills to be taught in context. For example The Elementary Language Arts Curriculum Guide (1978) provides for effective study skills in goal sixteen which include: location skills, organizational skills, evaluation skills and reading rate skills. This study is an attempt to determine if the method prescribed by the Ministry in these statements is practised in the primary grades in British Columbia.

BACKGROUND OF THE STUDY

In 1980, Joan Harper, a teacher-librarian and Sandra Tully, a primary classroom teacher wrote a handbook titled, Primary Library Activities (see appendix 6). In it they illustrated practical, teaching strategies which demonstrate the process of teaching access to information at the earliest primary levels. The work did not attempt to show how research activities can be integrated into classroom units of study but the authors state in their introduction that the user should consider the activities as: "a series of suitable suggestions that can be adapted and integrated into units of instruction in primary programs." (Harper & Tully, p.3). In this statement they conveyed their belief which agrees with that of the prescribed curriculum guides in British Columbia that information skills should be taught within coherent units of instruction.

For four years before the handbook was written, the authors had cooperatively planned and taught units of study to primary grade pupils into which information skills were integrated. Both teachers believe the program produced significant benefits for pupils and teachers not only because their evaluations showed students had acquired important skills but because when two professionals work with one class it reduces the pupil/teacher ratio significantly. More individual attention can be given to each pupil. When they spoke of the program to colleagues or presented their program at conference workshops the question they were asked most often was, "What can primary pupils do using a school library resource centre?". They wrote Primary Library Activities to answer that question.

They intended their work to reflect their belief that information skills should be taught by integrating them into subject areas as soon as formal education begins. Because they considered their views paralleled methods the Ministry of Education in British Columbia prescribed, they wondered why many of their colleagues were surprised when they described their program. This posed a question in their minds: to what extent do educators concerned with teaching primary pupils in British Columbia integrate information skills into primary units of study? This study will attempt to answer that question.

STATEMENT OF THE PROBLEM

The purpose of this study is to determine if information skills are being integrated into primary curricula in British Columbia. The objectives of the study are to determine answers to the following questions:

1. To what extent do primary teachers and teacher-librarians integrate information skills into primary curriculum subjects in British Columbia?
2. Do teacher-librarian qualifications and/or hours of employment in a school library resource centre influence the integration process?
3. Does the handbook, Primary Library Activities, facilitate the integration of information skills into primary curricula?

ASSUMPTIONS

It was assumed that all respondents in this study understood the concept of cooperative planning and team teaching and ways information skills could be integrated into curriculum subjects. A second assumption was that all participants regarded teaching information skills as part of their own teaching role not just the teacher-librarian's role.

RATIONALE FOR THE IMPORTANCE OF THE STUDY

The needs of the information age demand that school library resource centres teach the processes of access to knowledge and that these processes are taught by methods that parallel as closely as possible the ways in which they will be used in real life situations. In the future methods by which information can be obtained may be mainly electronic but the need to select facts that are appropriate, to organize them and to apply them to one's own needs will remain always. At present:

....any student who has access to a home computer, a telephone and a modem has available in one evening more information than his or her parents have had in their lifetimes and data from these sources are more accurate, less biased and can be obtained more quickly than by asking parents or teachers. (The Province, July 8, '84)

It is generally accepted that it is no longer possible for any one person to know everything in his or her chosen field. Instead today's expert must know how to find, use, assimilate and build on knowledge in ways that will meet his or her own needs and in ways that will contribute to the body of knowledge others can use. Library

resource centres in schools enable educators to teach students how to gain access to resource materials and how to use that information once they have obtained it. If students are to keep pace with a changing world, teaching the location and use of information should become a prime basic in schools today. The demands of the knowledge explosion must be met by incorporating within the curriculum, skills which require using knowledge in a meaningful way instead of teaching rote memorization of facts. However, for such skills to be applied to daily living students must use them in context, which means integrating them with curriculum units of study. These skills must be viewed as necessary to the learning process. For information skills to be integrated effectively cooperative, detailed planning and teaching between classroom teachers and teacher-librarians is required. The importance of such programs is stressed by Lubans:

A program of such import can never be left to whim or chance.

It must be scientifically planned and systematically implemented; the library must function as a learning laboratory, and the librarian must serve as a teacher whose subject is learning itself. (1974, p.48)

Stores of information always have been the source from which new knowledge has sprung even as far back as ancient times. The library, founded by the Ptolemy Dynasty in 250 B.C. at Alexandria was without equal in the ancient world and it flourished throughout the Roman period. At its height, it was believed to have over one million scrolls and scholars who used this resource had even developed a forerunner of the steam engine. If this library had not been destroyed it is estimated that the world's knowledge today would be two thousand years ahead

of what it is, presently. (Larsen, 1961) If history has shown us that using banks of information creates new knowledge surely teaching the use of knowledge should be an integral part of every student's education.

There are other major reasons why it is necessary that students should be taught to become skillful users of information. First, they must understand the importance of recording knowledge so it will not be lost to future generations. Consider what already has been lost for lack of records. Today we know that the ancient Egyptians were advanced mathematicians but we can only make educated guesses as to how they built the pyramids. As well, with all our high technology we cannot duplicate the concrete used in Roman roads; we know only that they were harder than any produced today and that they have lasted in good repair for century upon century. It is important to convey to children the need to prevent this loss of knowledge in the future.

A second reason it is necessary to teach students access to information is so we will move forward and not waste effort recreating knowledge that already has been discovered. In Megatrends, John Naisbitt claims scientists are complaining that it takes longer to find out if an experiment already has been conducted than it takes to conduct the experiment:

Uncontrolled and unorganized information is no longer a resource in an information society. Instead, it becomes the enemy of the information worker. Scientists who are overwhelmed with technical data complain of information pollution and charge that it takes less time to do an experiment than to find out whether or not it has already been done. (1982, p.17)

Teaching students access to recorded knowledge is essential in the creative process and is challenging educators concerned with school library resource centres today. This aspect of education should not be ignored. The preliminary work completed before Primary Library Activities, was written demonstrates that even at the earliest primary grades pupils can begin to learn information skills. These will stand them in good stead throughout their lives. Mastering how to find, compile, organize, synthesize and use information enables students to use knowledge as building blocks in their own education and eventually to create new wisdom in his or her chosen field. For these reasons this researcher posits that it is important to determine if information skills are being taught in our schools and to discover what methods are being used to teach them.

DEFINITION OF TERMS

A number of terms have been defined to reflect their use in this report:

1. Cooperative planning and teaching - The process through which a unit of study into which information skills are integrated is planned and taught jointly by a classroom teacher and a teacher-librarian.

2. Information skills - Those competencies needed to gather information from a wide variety of sources and those needed to use information in a meaningful way. It replaces such terms as "research skills" or "library skills" which are considered

to be narrower in scope.

3. School library resource centre - A library which houses many sources of information both print and non print and is located in a school. Other terms, used in the professional literature which refer to such centres include: library, media centre, media resource centre, learning resource centre and instructional media centre.

4. Teacher-librarian - An experienced, qualified teacher who has had additional training as a school librarian.

CHAPTER 2

REVIEW OF LITERATURE

The intent of this study is to examine the extent to which information skills are integrated into primary curricula in British Columbia. As the remainder of this chapter will demonstrate there are many educators (Davies, Hart, Haycock, Leppert and Lubans) who state that information skills should be taught by integration with curriculum subjects. However, the review found two areas directly related to the topic of this thesis that have been neglected by researchers in the field. No research or studies were found pertaining to integration that attempted to find whether classroom teachers and teacher-librarians actually are teaching information skills by this method. The search revealed only studies that demonstrate that information skills are more meaningful and better retained when taught in context with classroom units of study. As well, the researcher found little information which pertained to the integration of skills at the primary level. Most literature in the field encompasses primary, intermediate and secondary grade education without specific reference. For this reason the review examines literature appropriate to all levels of education. As well, it concentrates on works written in the last decade as the concept of integrating information skills into curriculum subjects evolved during that time. Authorities in the field as well as the results of research studies on the subject have been cited.

THE PURPOSE OF TEACHING INFORMATION SKILLS

The purpose of teaching information skills is to provide students with the

ability to use bodies of knowledge in meaningful ways:

It has been said that the mark of an educated man is not his ability to recall answers to specific questions but his ability to recall and utilize sources that will provide answers to questions or give clues or answers. (Leppert, 1963)

A person who masters the skill of using information resources has a far larger knowledge base to utilize than one who must rely on that which is stored in his or her own memory. Skills which enable students to use information are replacing memorization of facts in education today because new knowledge is being added to all fields of study at a tremendous rate.

Between 6,000 and 7,000 scientific articles are written each day. Scientific and technical information now increases 13% per year, which means it doubles every 5.5 years. But the new rate will soon jump to perhaps 40% per year because of new, more powerful information systems and an increasing population of scientists. That means that data will double every twenty months. (Naisbitt, 1982)

Factual knowledge is placed in a constant state of flux and as "rapid societal changes demand that individuals learn to cope with an emerging society and to have a role in shaping that change" (Overly, 1980, p.vii) it will become necessary for everyone to be an independent, lifelong learner to adequately meet life's expectations. This eventuality was foreshadowed in the first quarter of this century when John Dewey stated that he did not believe curriculum ends should be merely the acquisition

of subject matter but instead believed that: "organized subject matter becomes a tool for learners to use in understanding and intelligently ordering their experiences" (McNeil, 1984, p.333). This thought from the past is presently viable when it is applied to teaching information skills because it reflects the current opinion of educators in the field.

THE LEARNING THEORY OF TEACHING SKILLS BY INTEGRATION

Many educators (Davies 1979, Hart 1985, & Lubans 1974) believe that students should acquire skills needed to process information as part of their basic education and they believe these skills should be acquired in ways that parallel as closely as possible the ways in which they will be used in real life situations. They purport that this is best accomplished by integrating these skills into classroom units of study. This they suggest, will lead to lifelong learning and to excellence in education. Their views are summarized by the following statement from Progress in Educating the Library User:

Learning how to use the library goes far beyond the traditional program of being introduced to library resources, services, and facilities; it involves developing the student's rational powers and encompasses learning how to think, how to communicate thought, and how to master the skill of lifelong learning.

(Lubans 1974, p.39)

Other authorities (Haycock 1981, Nickel 1975, Prostano 1982, and Wehmeyer

1976) believe that to adequately teach information skills the resource centre should be considered an extension of the classroom. They suggest research and study skills need to be planned and taught within coherent units of study because that most closely resembles how information eventually will be used in life. Students when they search for and use facts to further their present knowledge of a curriculum subject see the process as one which is practical because: "... students learn best if the information is taught in a way that closely parallels the manner in which the skill will be needed in real life." (Lubans 1978,p.35)

A research study by Ron Blazek found that classroom teachers influence the process of teaching information skills and determine the kinds of materials signed out by their students. They also influence the frequency with which students visit libraries. As a result of this finding Blazek suggests that teachers, teacher-librarians and administrators must work together if maximum use of resource materials is to be achieved. (School Library Journal, Winter '82)

In the last decade the literature of even those whose works still treat the teaching of information skills as separate lessons (Devine 1981, Wiekert & Wood 1981) often declare in the introduction to their works, that the user should consciously integrate such lessons with classroom units of study. For example, Kuhlthau states in her introduction: "This sequential program is meant to be integrated with the content areas of the curriculum and should be supplemented by extensive individual use of the library media centre". (1981, p.viii) The Wisconsin School Library Media Association also uses this approach in The Wisconsin Library Media Skills Guide (1979). In the Forward they stress the process of integrating the knowledge of "how" something is

done with the practical "doing" of it, even though in the body of the guide isolated lesson plans are outlined by which skills could be taught.

Evidence has accumulated which indicates that subject specialists regard the integration of information skills as essential because of the growing realization that it is no longer possible to teach all aspects of a particular discipline. In the area of teaching reading it is noteworthy that Forgan and Mangrum (1976) recommend the SQ3R study strategy: Survey, Question, Read, Recite and Review. In it are included many skills which often are considered information or research skills such as skimming and summarizing. They expect their method to be applied to all the content areas of a school's curriculum and to have universal application. In the reading area Tonjes and Zintz state even more emphatically in Teaching Reading/Thinking/Study Skills in Content Classrooms that: "there is a continuum in the levels of reading/thinking/ study skills" (1981 p. 21) They devote an entire chapter to improving study skills and cover topics such as locating, organizing, interpreting, applying and using information. It can be concluded from these works that in the same way reading skills are not taught in order that students can read only basal readers; information skills are not taught in order that students can complete only library assignments. Both are intended to be universally integrated with all the subject areas.

Other authorities go even a step farther and say that when classroom teachers and teacher-librarians plan and teach information skills in context it not only enables students to see skills as practical but enables them to retain them more completely. (Haycock 1982, Porter 1986) This view is supported in the area of curriculum development by John Goodlad and Jerome Bruner, who corroborate that

planning cooperatively and integrating subject matter leads to better learning. In a study of schools by Goodlad, Sirotnik and Overman, (1979) the conclusion was reached that in more effective schools, group planning is common, whereas in less effective ones, teachers work alone much more, which results in little coordination, encouragement, or support for each other or for their students. Jerome Bruner says: "the entire program must be organized so as to relate the parts to the whole, for unless detail is placed into a structural pattern of interrelatedness it is rapidly forgotten." (Davies 1979, p. 72). This summates the theory of most educators on how information skills should be taught. It seems clear from many sources that the philosophy of integrating skills with classroom units of study whenever possible is desirable not only because students see the application of curricula to real life situations but because they retain skills better.

HOW INFORMATION SKILLS ARE DEFINED

Locating facts, organizing thoughts, questioning the opinions of others, taking notes, outlining reports and writing well constructed paragraphs within them are all skills important to the processes of accessing and organizing information. Information skills are interpreted as any skills needed to gather, use, produce or process resources from which knowledge is obtained. (Davies, 1979) Within this definition there is considerable variance from one authority to another as to which skills are most important and as to how skills should be broken into components for teaching. For example, in The School Library Media Program: Instructional Force for Excellence information skills are regarded as:

Knowing how to think, knowing how to learn, and knowing how to communicate which are requisite to effective citizenship; therefore, no skills are more worthwhile building than those thinking-learning-communicating tools basic for an informed electorate. (1979, p. 303)

Davies calls the scope and sequence for her library media program a "Thinking - Learning - Communicating Skills Continuum" because she views these skills as the ones most necessary to students in adult life.

Leppert emphasizes process rather than product. This she believes is most important when students conduct research. She considers that having students use information resources on an ongoing basis is essential and that from such use students acquire specific skills incidentally. Process, she suggests gives students the means to continue learning throughout the rest of their lives and she stresses that she considers this is a very valuable gift. She compares factual learning with acquired skills by saying:

Perhaps much of what the pupil learns ... will wear thin or become obsolete but skills learned in school continue to be functional indefinitely, or for as long as they are needed. Skills are the most permanent of learnings. (John & Fraser, '63. p.53)

In British Columbia, the Vancouver School Board in The Foundation Curriculum recognizes the need students have for information skills. It defines information skills as those all students:

.....require skills for locating information, organizing it, evaluating it, reporting it and using it. Whether it be for

investigating an issue, preparing a speech, answering a question, solving a problem, studying for an exam, making notes, or planning a field study, the skills required are an important part of the entire school program. (phases 1-6, 1978)

This curriculum consciously provides for and institutes these skills into programs in every phase of education from kindergarten to grade twelve.

The conclusion can be reached after an examination of what has been written in the field that any skill required to use material containing knowledge can be considered an information skill.

SCOPE AND SEQUENCING INFORMATION SKILLS

The literature on continuums for scope and sequencing information skills was found to be even less uniform than that on the definition of such skills. It seems logical to assume that information skills need to be taught within a framework and to be provided for in a logical order and sequence. However, Thomas Hart concludes, after he compared scope and sequence charts from over one hundred school districts, that although teacher-librarians agree upon broad media skills areas, it is difficult to find consensus concerning the grade levels at which the skills should be taught. Accordingly, he explains that the sample provided in his text, Instruction in School Media Center Use should be used only as a blueprint, since each school district has unique students and areas of the curriculum it emphasizes. He states that the social environment, the group dynamics and the needs of pupils in different socio economic stratas vary and so continuums should be unique to the needs of a particular situation. Haycock supports this view when he argues that any continuum for information skills should be school based and staff developed. He says: "the process of

involving teachers in articulating specific information skills at different grade levels provides part of the framework or reference points for effective cooperative planning". (1984)

In addition to Hart and Haycock, Davies and Leppert agree with this view. Davies says that the order and the units within which skills are taught are not important as long as skills are taught in context with subject areas. Leppert believes students learn skills by using information on an ongoing basis. She believes that within a staff developed framework the subject areas can be integrated and information skills developed with increasing complexity and difficulty even though the actual acquisition of them will be incidental.

It appears that regardless of what scope and sequence is used to teach information skills the continuum should be developed by or accepted and adapted by a teaching staff at the school level. Otherwise there will not be commitment to it because it will not meet the needs of a particular teaching situation.

TEACHING INFORMATION SKILLS AT THE PRIMARY LEVEL

When educators provided for information skills to be taught and wrote continuums embracing them, it was found that they began at the primary grade level. However, even though the philosophy of integrating information skills with curriculum units of study is well documented generally, it seldom refers specifically to the primary grades in this context. It is only by implication and the generality of statements made that it is known that the philosophy is intended to apply to the early years. In fact, as the following paragraphs will show the primary grades have been largely overlooked in the field of school library education. Doctoral dissertation

abstracts from the year 1975 to the year 1985 show no school library research done in the primary area. The small amount of literature available which pertains directly to primary students almost totally neglects the integration factor. Books and other publications available in the field (Beck & Carney 1981, Margrabe 1973 and Walker & Montgomery 1977) largely concentrate on the isolated skill lesson approach. This contrast to the accepted body of literature on the subject is unfortunate. If to be meaningful, information skills need to be integrated into classroom units of study, it would seem logical that the younger the student the more integration would be necessary. Surely primary pupils should be acquiring skills in context so they can transfer them to personal tasks which will be pertinent when they conduct research as senior students.

There are some exceptions to the dearth of material found at the primary level which are written to reflect the philosophy of integrating information skills. One example can be found in Seaver's forward to Library Media Skills: Strategies for Instructing Primary Children (1984) where she states that activities in her book are to be planned and implemented with classroom teachers so they can be integrated into units of study. In the remainder of her book she focusses on simple, realistic skills which can be used in this way. Another example of integration at the primary level is found in Library Study Skills Instruction in Hawaii's Schools (1982). It embraces the primary grades and provides concrete examples of units which integrate information skills. Planning and instructional models of skills taught to primary pupils in context are included. The thrust is away from students learning specific skills in isolated lessons and towards students learning skills incidentally when they are conducting research. In this book subject areas such as Science, Social Studies or Language Arts are used to demonstrate the process. The stated goal of the

administrators, classroom teachers and teacher-librarians who wrote this guide is to make students independent, resourceful users of knowledge.

CURRICULUM SUPPORT FOR INTEGRATION

Teaching skills needed to process information by integrating them into curriculum subjects is recognized by Ministries of Education in Canada. Canadian provincial curricula prescribe for information skills to be consciously integrated into many subject areas. In 1978 the Ministry of Education in British Columbia published, Scources and Resources, a handbook containing the Ministry's policy on how library resources should be utilized in British Columbia. It states the following philosophy regarding the teacher-librarian's role in integration:

Teacher-librarians should be prepared to work closely with individual classroom teachers in indentifying particular skills which may best be taught cooperatively, and be willing to organize their time to accomodate such teaching.

(1978, p.1)

Recently, Alberta updated its policy on school library resource centres in a paper titled, Policy, Guidelines, Procedures, and Standards for School Libraries in Alberta (1984). This document stresses even more emphatically than British Columbia's that school library programs should be fully integrated with the instructional program of the school. It states that classroom teachers and teacher-librarians should share responsibility in ensuring that students achieve required goals and objectives. The policy begins with this statement:

Students in Alberta schools should have access to an effective school library program integrated with instructional programs to provide improved opportunities for student achievement of the Goals of Basic Education for Alberta. (1984 p. i)

Perhaps the best received and most widely publicized Ministerial statement in Canada on school libraries is Ontario's Partners in Action "The Library Resource Centre in the School Curriculum" (1982) In it the principal, the classroom teacher and the teacher-librarian are regarded as partners in resource based learning. It defines what school library education is to be in the Province of Ontario thus:

Planned educational programs that actively involve students in the meaningful use of a wide range of appropriate print, non-print, and human resources. Programs are designed to provide students with alternative learning activities; the selection of activities and learning resources, the location of the activities, and the expectations for a particular student depend on the objectives established for that student. (1982, p.6)

This clear, concise, philosophical statement activates both integration of skills with curriculum subjects and cooperative planning between classroom teachers and teacher-librarians. In British Columbia the provincial Teacher-Librarian's Association has recommended that the Ministry in this province update its policy using it as a guide.

The Canadian Achievement Tests of Basic Skills reflect the aims of provincial curriculum guides. They state:

Since a major purpose of education is to teach students how to learn independently, any system of education must acquaint students with sources of information and teach students the skills they need to use the sources efficiently. When students have acquired such skills, they possess a core of competence that enables them to explore for themselves any subject. Instruction in the use of various sources is relevant to all academic areas.

(1983, p.28)

It appears from the above statements made in educational policies in Canada that the principles developed by Eunice Johns and Dorothy Fraser that are outlined in Skill Development in the Social Studies (1963) have been accepted. They were first published by the National Council for Social Studies in the United States. They state the ways in which skills needed to acquire information should be taught:

1. The skill should be taught functionally, in the context of a topic of study, rather than a separate exercise.
2. The learner must understand the meaning and purpose of the skill, and have motivation for developing it.
3. The learner should be carefully supervised in his first attempts to apply the skill, so that he will form correct habits from the beginning.
4. The learner needs repeated opportunities to practice the skill, with immediate evaluation so that he knows where he has succeeded or failed in his performance.
5. The learner needs individual help, through diagnostic

measures and follow-up exercises, since not all members of any group learn at exactly the same rate or retain equal amount of what they have learned.

6. Skill instruction should be presented at increasing levels of difficulty, moving from the simple to the more complex; the resulting growth in skills should be cumulative as the learner moves through school, with each level of instruction building on and reinforcing what has been taught previously.

7. Students should be helped, at each stage, to generalize the skills, by applying them in many and varied situations; in this way, maximum transfer of learning can be achieved.

8. The program of instruction should be sufficiently flexible to allow skills to be taught as they are needed by the learner; many skills should be developed concurrently." (1963 p. 310)

Canadian Ministries of Education recognize that to integrate information skills using these guidelines with Social Studies or any other subject requires a cooperative approach between the classroom teacher and the teacher-librarian. They provide for such teaching in their policy statements.

SUMMARY OF REVIEW OF LITERATURE

The literature on school library resource centres suggests that the aim of teaching information skills is to enable students to deal with the huge amounts of knowledge that are available to them. As well, authorities believe that teaching the

processes of access to information will allow students to deal effectively with rapidly changing knowledge in the future. Information skills are defined as any skills needed to process or utilize materials which contain information. Because skills traditionally regarded as library skills, such as the categories of the Dewey Decimal System or the entries on a catalog card soon will be replaced if they are not already by electronic devices Ken Haycock suggests that today: "The single most important role of the teacher-librarian is cooperative program planning and teaching with classroom teachers" (1982, p.5). It is considered a necessity to plan with teachers because until students see a reason for using the numerous research tools available to them through practical applications of skills they will have little success in using or desire to use information resources. The process of integrating the knowledge of "how" something is done with the practical "doing" of it is seen as an essential throughout life.

(Wisconsin Library Media Skills Guide, 1979)

School library resource centres are viewed as ideal places for the horizontal extension of all subjects taught in school. Traditionally, they have exposed students to geography, history, problem solving, literature and the tradition of great thought. Currently the trend is seen as one toward integrating into these subjects skills that will make young people lifelong learners. The core curriculum in British Columbia emphasizes the importance of this approach when it states: "The development of research and study skills is essential in all fields of learning and it is the responsibility of all teachers to encourage this development whenever appropriate."(Guide to the Core Curriculum 1977, p.29)

Literature on the integration of information skills recognizes that the systematic sequencing of information skills is important but it is not uniform on the

grade levels at which various skills should be taught. It recommends that a continuum for teaching skills is best developed at the school level. In developing such a continuum a means should be used that gives all teaching personnel in a school input into it so there will be wholehearted commitment to the process. The ongoing use of information at all levels of education is more important than the order or grade level at which certain skills are taught. School programs need to ensure that the objectives of the classroom teacher, the teacher-librarian, and those of the individual student are met while at the same time satisfying the prescribed curriculum.

The current philosophy emphasizes the integration of information skills into curricula at all levels of schooling and even though this philosophy is seldom designated to the primary grades specifically it certainly is by implication. Provincial Ministries of Education including British Columbia, are found to prescribe the integration of information skills in curriculum guides. While neither Ministries nor other authorities explore the area of the beginning grades in depth it can be inferred from the universality of statements made on the integration of information skills that the same philosophy that applies to the field generally applies to the primary grades.

The literature makes a clear statement on how and why information skills should be integrated into classroom units of study. However, no research has been conducted on whether or not educators are actually teaching information skills in this manner at the school level. It left this author with the question of whether administrators, classroom teachers and teacher-librarians follow prescribed curriculums and educational research in this regard. This study will attempt to find

answers to this question for one geographical region, the province of British Columbia and at one level of education, the primary grades.

CHAPTER 3

METHODOLOGY

This study was designed to find the extent to which information skills have been taught in context with curriculum subjects to primary pupils in British Columbia. It was intended to answer the following questions using a survey method to collect data:

1. To what extent have primary teachers and teacher-librarians integrated information skills into primary curricula in British Columbia.?
2. Have teacher-librarian qualifications and/or hours of employment in a school influenced the integration process?
3. Has the handbook, Primary Library Activities facilitated the integration process?

LIMITATIONS

The sample of educators used for this survey came from a wide variety of teaching situations, from city and rural environments and from schools with enrollments of less than ninety nine pupils to those with over five hundred. It consisted of classroom teachers, teacher-librarians, principals and district library coordinators. All faced a common decision of whether to integrate information skills into curriculum subjects or whether to teach them in isolation at the primary level of education. However, some situational factors had to be taken into consideration which limited the scope of the responses to the questions listed above. First,

limitations such as support at the school district level or district policies regarding the hiring of teacher-librarians were not taken into account by this survey but could have influenced responses. Secondly, it should be noted that the sample was chosen only from those who had indicated an interest in the field by purchasing a copy of Primary Library Activities. By using a sample of this nature the survey applied only to those who could be assumed to be teaching information skills in some measure and it is possible that a random sampling would have found a number of educators who were not teaching information skills at all.

THE SAMPLE

The sample used in this survey consisted of educators in British Columbia who had purchased Primary Library Activities in the years 1984 and 1985. The sample was limited to purchasers of the handbook so that the usefulness of the handbook in assisting educators to integrate information skills could be tested in addition to surveying the extent of integration itself. Names and addresses were obtained from the record of buyers at the British Columbia Teachers' Federation Lesson Aids Office. As their records are kept for only two years it was necessary to limit the sample to those for whom records were available. In total, of the one hundred and eighty two people who had bought the publication during that period eighty one names were retrieved. Sixty five names were compiled of elementary school personnel and sixteen names of district personnel. (see appendix 1) Vancouver School District was excluded from the survey because the researcher had worked there for many years and respondents from that district might possibly be biased in reaction to a handbook written by her. The remainder of the sales were impossible to

trace either because records were incomplete or because sales were in bulk and not to individuals. Some orders were for more than one copy. Each buyer was sent the number of questionnaires that equalled the number of copies he/she had ordered and was requested to pass the questionnaire to the person who had received the handbook. This made the total number of possible responses ninety one. Of this number sixty three responded or sixty seven per cent of the sample.

INSTRUMENTS FOR DATA COLLECTION

Two survey instruments were designed to collect data relating to the questions posed by this study. The first was a written questionnaire which was mailed to the sample of purchasers of Primary Library Activities. (see appendix 2) The questionnaire consisted of three parts. Part one concentrated on demographic information such as the type of locale in which the schools the respondents worked were situated, the number of academic courses the teacher-librarian had completed in school library education, the enrollment of the schools and similar information. The second section consisted of questions which related to whether information skills were taught by integration or in isolation, and the third section of questions related to the usefulness of the handbook in relation to the integration process. A letter of transmittal which explained the purpose of the study to the potential respondent accompanied the questionnaire. (see appendix 3) The questionnaire was designed so that it could be returned to the researcher anonymously.

The second instrument designed to collect data was telephone interviews. They were conducted according to a standard format designed to explore the integration of information skills at the primary level more fully. (see appendix 4)

Subjects were selected from those volunteering on a form which accompanied the written questionnaire. The form could be detached from the questionnaire and mailed in a second envelope provided for this purpose so anonymity could be maintained. The subjects were selected from those who volunteered for interviews on the basis of their educational role. Two primary classroom teachers, two teacher-librarians, two administrators and two district library coordinators were chosen to be interviewed.

FIELD TESTING

The questionnaire was field tested on a group of primary classroom teachers, teacher-librarians and administrators from the Vancouver School District who had purchased Primary Library Activities in the same years as the sample used for the survey. Several revisions were made in the format of the questionnaire after the field test was completed. Principally these were changes in wording to clarify the meaning of some questions. Once these changes were completed the questionnaire was mailed to all participants.

Three weeks after the questionnaire had been sent a follow up letter was mailed to all participants. (see appendix 5) It requested that the potential respondent return the questionnaire if he/she had not already done so.

DATA ANALYSIS

The analysis was conducted by first tabulating the responses to each question. After the tabulations were completed a computerized analysis of variance

was conducted. This compared the demographic information in questions one, three, four and seven in part one of the questionnaire with questions 8, 9, 14, 15, 16, 20 and 21 in parts two and three. The latter were the questions directly concerned with integration and therefore, most important to the purpose of this thesis. Responses from part two of the questionnaire were directed to answering questions one and two and the findings from part three to answering question three.

The data collected from the second instrument, the telephone interviews was collected, analyzed and compared with the data from the first instrument. Its main purpose was to elaborate upon that collected by the written questionnaire.

The results of the survey were regarded as constituting qualitative answers to the questions stated in the purpose of the thesis.

CHAPTER FOUR

PRESENTATION OF FINDINGS

This study was designed to answer the three questions described in the statement of the problem at the beginning of chapter one. There were two instruments used to answer the questions: a written questionnaire mailed anonymously to all educators who had purchased Primary Library Activities in a two year period and oral telephone interviews conducted with selected educators at the classroom, school resource centre, administrative and district levels of education. The latter were designed to supplement the information received from the questionnaire.

The first part of the questionnaire was composed of statistical data such as the educational role of the respondent, the type of locale in which the school the respondent worked was located, how many courses the teacher-librarian the respondent worked with had completed in school library education, and how much time per week the school in which the respondent worked was served by a teacher-librarian. The second and third parts of the questionnaire were composed of questions relating directly to the problems posed in the study. All responses were summarized and crosstabulations made to determine if any of the statistical data in the first section were related to responses in the second and third sections.

The demographic data from the questionnaire is shown in tables one to four. The first table describes the respondents role in the education system.

TABLE 1

Distribution of Subjects by Occupational Position

<u>Position</u>	<u>Frequency</u>	<u>Percent</u>
primary teacher	21	33.3
teacher-librarian	32	50.8
administrator	6	9.5
dist. personnel	2	3.2
other	2	3.2
TOTAL	63	100.0

Table two describes the type of locale in which the schools of respondents were located:

TABLE 2

Setting of Schools in the Sample

<u>Location</u>	<u>Frequency</u>	<u>Percent</u>
rural	11	17.5
town	12	19.0
small city	10	15.9
city	30	47.6
TOTAL	63	100.0

The number of academic units the teacher-librarian working in the school had completed in school library education has been outlined in table three.

TABLE 3

Units in School Library Education Completed by the Teacher-Librarian

<u>No. of Units (U.B.C.)</u>	<u>Frequency</u>	<u>Percent</u>
1.5-3.0	6	9.5
4.5-6.0	13	20.6
7.5-9.0	10	15.9
over 9	13	20.6
TOTAL	42	100.0

It should be noted that there were a large number of missing responses to this question. Twenty one respondents did not reply.

The amount of time the school in which the respondent worked was served by a teacher-librarian is described in table four.

TABLE 4

Hours per Week a Teacher-Librarian Worked in the School

<u>Time</u>	<u>Frequency</u>	<u>Percent</u>
25hrs.(full time)	23	36.5
20-24hrs.	11	17.5
15-19hrs.	11	17.5
10-14hrs.	12	19.0
<10hrs.	6	9.5
TOTAL	63	100.0

The first of the questions this study posed was: "To what extent have primary teachers and teacher-librarians integrated information skills into primary curriculum subjects in British Columbia?" It appeared that a majority of schools were using flexible scheduling in their school library resource centres. Most schools did not rigidly schedule each class into the resource centre on a weekly basis but used

the resource centre on a flexible basis as educational purposes demanding the use of research materials arose. Of the sixty three respondents 57.1% said they worked entirely on a flexible basis and 88.9% stated that even though classes were scheduled there was some flexibly scheduled time available. Only 11.1% of the respondents stated there was no flexible school library time.

TABLE 5

Scheduled Time in School Library Resource Centres

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
yes	26	41.3
no	36	57.1
missing	1	1.6
.....		
TOTAL	63	100.0

TABLE 6

Flexible Time in School Library Resource Centres

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
yes	56	88.9
no	7	11.1
.....		
TOTAL	63	100.0

The second finding applicable to the integration of information skills was the result of the question on whether or not schools had a written scope and sequence of information skills. Tabulations show that 84.1% of schools from which replies were received had such a sequence. These results are diagramed in table seven.

TABLE 7

Frequency of Scope and Charts of Information Skills in Schools

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
yes	53	84.1
no	9	14.3
missing	1	1.6
TOTAL	63	100.0

These results indicate most schools had accepted a formal scope and sequence of skills and that educators in the school system were aware of such a continuum.

To answer definitively how the scope and sequence was implemented whether by integrating these skills into curriculum subjects or by teaching them as separate lessons a number of questions relating directly to integration were asked. In the first question respondents were asked directly whether or not information skills were taught in separate lessons or integrated into curriculum subjects in the school in which they worked. The results of this question were as follows:

TABLE 8

Frequency of Information Skills Taught by Integration or in Isolation

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
separate	7	11.1
integrated	53	84.1
missing	3	4.8
TOTAL	63	100.0

Of the respondents, 84.1% said skills were taught by integration in the school in which he or she worked. Next they were asked how they believed information skills should be taught regardless of how they actually were taught in the school in which the respondent worked. As can be seen in table 9 the results in this case were almost identical with those of the question above.

TABLE 9

Respondents' Belief as to How Information Skills Should Be Taught

Response	Frequency	Percent
by integration	54	85.7
separately	5	7.9
didn't matter	1	1.6
need more info.	2	3.2
.....		
TOTAL	62	100.0

In the telephone interviews 100% of the interviewees stated they believed information skills should be taught by integration. However, when they were asked to what extent they observed information skills were being taught in schools and their estimates were totalled and averaged the response came to 62.7%. This finding was considerably below the responses tabulated in tables 8 and 9.

When crosstabulations, comparing the responses to questions significant to the integration process, were made with the demographic data in part one of the questionnaire only one significant result was found. It concerned whether or not the school in which the respondent worked had regularly scheduled library periods. The factor of location was related to responses in this question.

TABLE 10

Crosstabulation of Responses: Location of School By Scheduled Periods

	<u>Sched.</u>	<u>Rural</u>	<u>Town</u>	<u>Sm. City</u>	<u>City</u>	<u>Total</u>
yes	5	5	8	8	26	
no	6	7	2	21	36	
TOTAL	11	12	10	29	62	

Chi Square 8.45899 Significance 0.0374

The percentage of city schools that reported school library resource centres with flexible scheduling was higher than those located in areas with smaller populations.

In the oral interviews these results were substantiated. The district coordinator of a rural school district said that in her district flexible scheduling was slow to be accepted because alternate arrangements had not been made to give teachers preparation periods. Teachers were loathe to give up scheduled library periods when it meant they would have no spare periods. On the other hand the coordinator of a suburban district said, "skills must be taught in context and must be planned by classroom teachers and teacher-librarians together. The program should be sequential meeting the needs of the curriculum. Pupils can't just wander into the school's library and get some books on a subject if it is to be a worthwhile program." She considered that scheduled library periods had vanished some years ago.

The second question the survey was designed to answer was: "Have teacher-librarian qualifications and/or hours of employment in a school library resource centre influenced the process of integrating information skills into curriculum subjects?" The responses the survey received to this question were negative. Neither of these factors was found to be significant in the integration process. Crosstabulations comparing the amount of training a teacher-librarian had

completed and/or the amount of time a school was served by a teacher-librarian with the existence of flexible scheduling, a written scope and sequence of research and study skills, or how information skills were actually taught, showed no significant relationships. When flexible scheduling was compared with the number of academic units in school library education the teacher-librarian working in the school had completed the results in the following table were compiled.

TABLE 11

Crosstabulation of Responses: Number of Units Completed by the Teacher-Librarian by Flexible Scheduling

FLEX. SCHED.	Courses				<u>TOTAL</u>
	<u>1.5-3.0</u>	<u>4.5-6.0</u>	<u>7.5-9.0</u>	<u>over 9.0</u>	
yes	5	11	9	13	38
no	1	2	1	0	4
TOTAL	6	13	10	13	42

When flexible scheduling was compared with the amount of time a school was served by a teacher-librarian the following table resulted.

TABLE 12

Crosstabulation of Responses: Teacher-Librarian Time in a School by Flexible Scheduling

FLEX. SCHED.	Teacher-Librarian Time					<u>TOTAL</u>
	<u>25 hrs.</u>	<u>20-24hrs.</u>	<u>15-19hrs.</u>	<u>10-14hrs.</u>	<u>10hrs.</u>	
yes	20	11	9	11	5	56
no	3	0	2	1	1	7
TOTAL	23	11	11	12	6	63

The existence of a written scope and sequence of research and study skills was compared to the academic qualifications of the teacher-librarian. The following results were obtained.

TABLE 13

Crosstabulation of Responses: The Existence of a Scope and Sequence Chart by Teacher-Librarian Qualifications

Scope & Sequence	Courses				<u>TOTAL</u>
	<u>1.5-3</u>	<u>4.5-6.0</u>	<u>7.5-9.0</u>	<u>over 9</u>	
yes	5	10	10	11	36
no	1	2	0	2	5
TOTAL	6	12	10	13	41

A comparison of a written scope and sequence of research and study skills with the amount of time a school was served by a teacher-librarian showed the following:

TABLE 14

Crosstabulation of Responses: Existence Scope and Sequence Chart by Teacher-Librarian Time

Scope & Sequence	Teacher-Librarian Time					TOTAL
	<u>25hrs.</u>	<u>20-24hrs.</u>	<u>15-19hrs.</u>	<u>10-14hrs.</u>	<u><10hrs.</u>	
yes	19	10	10	11	3	53
no	4	1	0	1	3	9
TOTAL	23	11	10	12	6	62

A comparison of whether the respondent stated information skills were taught separately or by integration was compared to the number of academic courses the teacher-librarian had completed. The comparison is shown in table 15.

TABLE 15

Crosstabulation of Responses: Skills Taught by Integration by Teacher-Librarian Qualifications

Skills Taught	Courses				TOTAL
	<u>1.5-3.0</u>	<u>4.5-6.0</u>	<u>7.5-9.0</u>	<u>over 9</u>	
separately	1	3	1	2	7
integrated	5	9	9	11	34
TOTAL	6	12	10	13	41

The large number of missing responses, twenty one, to the question on teacher-librarian qualifications should be noted. It has made all comparisons with

teacher-librarian qualifications less reliable than if the same number of responses had been received to this question as were received to the others on the questionnaire. There could be two possible reasons for the large number of missing responses to this question. It is possible that those who did not reply to this question did not know what professional courses their teacher-librarian had completed and did not inquire. It is also possible that those who did not respond did not do so because the teacher-librarian had not taken any courses in school library education.

In the oral interviews the findings to this question did not always agree with those of the questionnaire. All the interviewees suggested that time and qualifications were important. However, one observation made on qualifications by a library coordinator might suggest otherwise. Even though she stated she believed academic courses were helpful her personal observation was that those who were qualified did not always make the best teacher-librarians. The factor she considered to be most important was a strong classroom teaching background. Good classroom teachers made good teacher-librarians in her experience.

The last question this study attempted to answer was: "Has the handbook, Primary Library Activities helped facilitate the integration of information skills into primary units of study?" The third section of the questionnaire was devoted to answering this question. Initially in this section, respondents were asked their reason for purchasing the handbook. Forty percent of those responding stated it was to use as a springboard to integration which indicated they accepted the philosophy of teaching information skills in context with curriculum subjects and were prepared to adapt the activities to fit their own purposes. The tabulations are shown in the following table:

TABLE 16

Frequency of Various Reasons The Handbook Was Purchased

<u>Position</u>	<u>Frequency</u>	<u>Percent</u>
broaden range	25	39.7
integration	20	31.7
availability	4	6.3
no special reason	1	1.6
missing	13	20.6
TOTAL	63	100.0

Next, respondents were asked into which subjects they had integrated activities from the handbook, Primary Library Activities on the assumption that if they could recall a specific subject area the integration would have been relevant. Tabulations of this part of the questionnaire showed the following:

The number of respondents who had integrated activities into language arts:

TABLE 17

Frequency With Which Activities Were Integrated With Language Arts

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
yes	47	92.2
no	4	6.3
missing	12	19.0
TOTAL	63	100.0

The number of respondents who had integrated activities into social studies:

TABLE 18

Frequency With Which Activities Were Integrated With Social Studies

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
yes	30	47.6
no	21	33.3
missing	12	19.0
TOTAL	63	100.0

The number of respondents who had integrated activities into science:

TABLE 19

Frequency With Which Activities Were Integrated With Science

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
yes	20	31.7
no	31	49.2
missing	12	19.0
TOTAL	63	100.0

The number of respondents who had integrated activities into another subject area:

TABLE 20

Frequency With Which Activities Were Integrated With Other Subjects

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
yes	1	1.6
no	48	76.2
missing	14	22.2
TOTAL	63	100.0

Language Arts was the subject into which most respondents who replied to this question had integrated activities from the handbook. 92.2% of those replying to the question had used this subject area which indicated that it was the most useful area into which to integrate activities from the handbook. It was followed by Social Studies into which 47.6% of those replying had integrated activities. Less than half the respondents had used Science as a subject area for integration and only 1.6% of respondents had integrated activities into other subjects. It is probably a valid assumption that those who did not reply to various categories in this question which is represented by the number of missing cases had not integrated skills into the curriculum subject in question.

Overall, when respondents were asked if they believed the handbook had assisted them to integrate information skills, the response was positive with 86% saying it was moderately useful or better. The responses were tabulated as follows:

TABLE 21

Usefulness of the Handbook in Assisting Integration

<u>Response</u>	<u>Frequency</u>	<u>Percent</u>
useful 1	8	12.7
useful 2	14	22.2
useful 3	11	17.5
mod. useful	10	15.9
less than useful 1	3	4.8
less than useful 2	1	1.6
useless	3	4.8
missing	13	20.6
TOTAL	63	100.0

MEAN 3.020

STANDARD DEVIATION 1.597

The results of the questionnaire indicate that the handbook had assisted the integration of information skills into primary curriculum subjects. The standard deviation and the mean are useful and meaningful. If one assumes that the respondents viewed the intervals between the possible responses on the scale as even the mean is considerably above what could be expected by the probable distribution of results. The results indicate a strong, positive response.

In the oral interviews all those interviewed stated they thought Primary Library activities was a useful tool in assisting integration. They stated that used properly handbooks can relieve some of the drudgery of planning everything from scratch. However, many of them introduced a note of caution by saying that even though publications such as these can facilitate integration there is always the danger of them being abused by teachers who just photocopy pages and give them to pupils as worksheets.

SUMMARY OF FINDINGS

The tabulations of this survey find various responses to the questions this study posed. Some findings are definitive but others are less clear. The first question, "To what extent have primary teachers and teacher-librarians integrated information skills into primary curriculum subjects in British Columbia?" received a positive answer. Of the respondents 84.1% stated skills were taught by integration and 85.71% said they believed that was how information skills should be taught. A majority of schools had a written scope and sequence of research and study skills the teaching staff was expected to implement. To accommodate teaching of

information skills 57.1% had flexibly scheduled their school library resource centres and 88.9% had some flexible time available. However, it was found that the percentage of flexible time was lower in schools located in rural areas than in those located in cities.

The second question, "Have teacher-librarian qualifications and/or hours of employment in a school library resource centre influenced the process of integrating information skills into curriculum subjects?" received negative findings. No relationship was found between either of these factors and the method by which information skills were taught. However, the question about the academic qualifications of the teacher-librarian had many missing responses making the findings in regard to this factor less relevant.

The last question, "Has the handbook Primary Library Activities helped facilitate the integration of information skills into primary curriculums", received a positive response. Of the respondents 86.1% believed it had been helpful to moderately helpful. This response was considerably higher than could be expected by the factor of probability of distribution. The subject respondents had most often used to integrated activities into was Language Arts. However, even though the handbook was seen as helpful it was indicated that it was necessary for teachers and teacher-librarians to view the publication only as a series of suitable suggestions and to adapt and integrate the activities to their own needs.

Overall the findings were indicative of a positive trend towards integrating information skills into primary curricula in British Columbia.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND SUMMARY

SUMMARY

Purpose

The purpose of this study was to find whether or not information skills are being taught in context with curriculum units of study in the primary grades in British Columbia. It attempted to answer three questions:

1. To what extent do primary teachers and teacher-librarians integrate information skills into primary curriculum subjects?
2. Do teacher-librarian qualifications and/or hours of employment in a school library resource centre influence the integration process?
3. Has the handbook Primary Library Activities, facilitated the integration of information skills into primary curricula?

The rationale for the importance of the study was based on educational research conducted by Johns and Fraser (1963), Goodlad (1979), Hart (1985) and others which demonstrated that information skills are more meaningful and better retained if they are integrated with classroom units of study so that pupils understand their purpose.

Methodology

To find answers to the questions posed in the study the researcher conducted a survey using two instruments to collect data. The first was a written questionnaire mailed to a sample of purchasers of Primary Library Activities. The second, was a series of oral interviews conducted by telephone using a standard format prepared

by the researcher (see appendix 4). The data collected in the oral interviews was intended to supplement that collected by the questionnaire.

Findings

The findings indicated a positive attitude towards teaching information skills by integrating them into curriculum subjects. A large percentage of school library resource centres had some flexible time available to support integration even though just over half were entirely flexibly scheduled. Flexible scheduling appears to be more common in urban areas than in rural areas. The variables of teacher-librarian qualifications and hours of employment in a school library resource centre did not appear to affect the integration of information skills. Respondents stated that the handbook, Primary Library Activities had been useful to them in facilitating the integration of skills into classroom units of study.

Limitations

The weakness of this study was the limited sampling. Only eighty one educators in British Columbia were mailed questionnaires. Sixty three responses were received out of this sample and of the sixty three only forty two replied to the question on teacher-librarian qualifications. The results of the study can be viewed as an indication only and to be definitive would need to be replicated by further research.

DISCUSSION OF FINDINGS AND CONCLUSIONS

The first question this study sought to find was, "To what extent do primary teachers and teacher-librarians integrate information skills into primary

curriculum subjects in British Columbia?" When the responses were tabulated they showed that the theory of teaching information skills by integrating them with primary classroom units of study is accepted by a majority of subjects who responded to the survey. Of the respondents 84.1% stated this is the manner in which skills are taught in their school and 85.7% stated this is how they believe such skills should be taught. Most schools polled, 84.1%, have a written scope and sequence of research and study skills to follow to pursue the teaching of these skills.

However, a necessary component for the school library resource centre to adequately support integration is flexible scheduling. It ensures that resource centre time will be available to meet the demands of classroom units of study as the need for research arises. This study showed that only slightly more than half, 57.1% of resource centres were entirely flexibly scheduled even though 88.9% have some flexible time available for student research. As 85.7% of those who responded to the questionnaire stated they believed skills should be taught by integration there appears to be a discrepancy between the theory educators in the study accept and what they actually practice. One would expect that in schools where educators believe information skills should be integrated resource centres would be entirely flexibly scheduled to accommodate such teaching, but that was not always the case.

Discrepancy between accepted theory and actual practice was found in responses to the oral interviews, as well. Of the interviewees 100% stated that skills should be taught by integration but when asked to what extent they observed information skills actually were being taught by integration to primary pupils their accumulated responses average only 62.7%. The theory of teaching information skills by integration appears to be accepted but a gap between theory and actual practice remains.

A second discrepancy was uncovered regarding flexible scheduling. Only 54.5% of schools located in rural areas reported they were entirely flexibly scheduled while 72.4% of those located in cities reported this method of scheduling. When the data of those who stated their school was situated in a rural area, a town, and a small city, were added and that total compared to the total of city schools the results were exactly the same; 54.5% for the smaller centres compared to 72.4% for cities. These results indicate that the factor of location may well be related to response on flexible scheduling in British Columbia. The trend to teaching information skills by integration is relatively new and new trends often start in large urban centres and then radiate to rural areas. This factor along with the findings from the questionnaire leads this researcher to the conclusion that flexible scheduling to accommodate the integration of information skills is more prevalent in cities at the present time.

The second question the study attempted to answer was, "Do teacher-librarian qualifications and/or hours of employment in a school library resource centre influence the process of integrating information skills into the curriculum?" The purpose of the second question was to discover if either of these variables influence the integration of information skills into curriculum subjects. It was anticipated that schools with academically well qualified teacher-librarians and/or a greater number of hours of teacher-librarian time would have a greater amount of integration. However, the findings did not support this thesis. Neither the number of academic units a teacher-librarian had completed in school library education nor the number of hours he/she was employed in the school library resource

centre appears to affect the integration process. However, it must be noted that in response to the question on teacher-librarian qualifications twenty two of the sixty three respondents did not reply. The reasons for such a large number of missing observations were probably twofold. One reason could have been that the respondent did not know whether the teacher-librarian in his/her school had taken academic courses in school library education and did not take time to inquire before completing the questionnaire. A second reason could have been that the teacher-librarian had not completed any academic courses in school library education. The large number of missing cases in this question made the findings in regard to formal education courses inconclusive.

The responses from the oral interviews to the second question only partially supported the evidence from the written questionnaires. All subjects interviewed thought that both teacher-librarian time in the schools and teacher-librarian qualifications were important. A typical response came from a principal who said, "I think academic qualifications give a teacher-librarian credibility on a school staff." A statement a classroom teacher made was, "I think qualifications are very important. In my present situation we do not have a trained teacher-librarian and compared to the school I taught in that did have one the program is very poor." On the other hand, a coordinator said, "In my experience well qualified teacher-librarians do not always do the best job. It has been my observation that good classroom teachers usually make good teacher-librarians."

On the question of teacher-librarian time the following opinion was offered by the coordinator of a rural district, "I feel time affects programs drastically. Most of our elementary schools have only a .4 teacher-librarian and I often hear complaints of frustration about the lack of time a teacher-librarian is in the

resource centre." A classroom teacher who worked in a city school with a part time teacher-librarian claimed, "The library to be really effective should be open all the time. When there is a part time person the timing always seems to be wrong. They are never there when I want to send pupils to the library."

The findings of the questionnaire showed no relationship between teacher-librarian time and/or qualifications and integration but this researcher posits that the lack of responses to the question on qualifications taken with statements made in the oral interviews provides enough contrary evidence to say the question is unresolved. No definite conclusions can be reached to the second question in this study.

The third question the study posed was, "Has the handbook Primary Library Activities, facilitated the integration of information skills into primary units of study?" A large majority, 86.1%, of respondents stated it had been moderately useful to useful. In answer to the question on which subjects activities actually had been integrated into, of those responding 92.2% stated Language Arts, 47.6% said Social Studies and 31.7% said Science. Other subjects were largely ignored. These percentages led this researcher to conclude that the handbook Primary Library Activities, has been a useful tool in implementing integration.

The interviews supported the results of the questionnaire in these findings. All of the interviewees stated the handbook had been useful. Typical comments were, "Yes, I think publications such as these give a very good framework to begin with. They help clarify information skills in a primary classroom teacher's mind when a teacher-librarian is discussing possibilities for a project with them." Another comment was, "Yes, concrete examples are helpful and they can be adjusted and adapted to give starting points. It helps not to have to reinvent the

wheel. I have observed that it is the capable, experienced people who appear to use the work of others. Less experienced ones don't seem to know what to use or what to leave out or how to adapt." They cautioned though, that such handbooks need to be used in a professional manner and even though they could save time they should provide only convenient starting points from which teachers and teacher-librarians change and adapt activities to meet the needs of individual programs. A statement which summarized their attitude was, " I have found publications such as these to be good starting points but they need to be tailored to one's own situation and enlarged upon."

Primary Library Activities has facilitated integration into primary units of study for those who purchased the handbook. This finding applies especially to the subject area, Language Arts.

RECOMMENDATIONS

The conclusions of this study lend themselves to several recommendations for education in British Columbia. It could be recommended that:

- educators move to close the gap between educational research which is supported by how educators in the field believe information skills should be taught and how skills actually are taught in schools.
- to support integration, consideration be given to making flexible scheduling standard practice in all school library resource centres. This recommendation would apply particularly to districts with rural schools.

- a survey be conducted again in five years time to determine if the gap between theory and practice, and rural and urban centres has narrowed in that time. This would have an additional advantage in that it would determine if a larger percentage of schools had converted entirely to flexible scheduling.

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Maple Grove School,
6199 Cypress Street,
Vancouver, B.C.,
May 1st, 1986.

Dear Educator:

As a purchaser of the B.C.T.F. lesson aid Primary Library Activities, you have been selected to participate in my thesis study. The aim of the study is to examine the teaching of information skills to primary pupils. Your participation by completing the attached questionnaire would be valuable in conducting this survey. Ten minutes or less of your time is all that is required.

My purpose in conducting the survey is to determine if Primary Library Activities, has been useful in assisting educators to integrate information skills into the curriculum. In part one you are requested to provide some general information about yourself and the school in which you work. This information will not be used to identify any particular educator or school. I would be pleased if on completing the questionnaire you would volunteer a personal interview to explore the subject in greater detail. In this case anonymity will be maintained by detaching the portion containing the information necessary for volunteering and mailing it in the stamped, addressed, white envelope included for this purpose. As a 100% return would be most beneficial for my research I would be grateful for your cooperation in this matter.

Please return your completed questionnaire in the brown, stamped, addressed envelope included in the package.

Thankyou for your time and effort in assisting with this project.

Yours Sincerely,

(Mrs. Joan E. Harper)

Teaching Information Skills to Primary Pupils

Please check after the appropriate answer.

Part I - General Information

1. This survey is being completed by
- | | |
|---------------------------------|-------|
| a. primary classroom teacher | _____ |
| b. elementary teacher-librarian | _____ |
| c. elementary administrator | _____ |
| d. district personnel, | _____ |
| e. other | _____ |
| please specify _____ | |

(If the respondent is district personnel please answer the questions as they would apply to the average or to most elementary schools in your district.)

2. Please indicate the number of pupils enrolled in your school:
- | | |
|-------------|-------|
| a. 0-99, | _____ |
| b. 100-199, | _____ |
| c. 200-299, | _____ |
| d. 300-399, | _____ |
| e. 400-499 | _____ |
| f. over 500 | _____ |
3. Is your school located in a :
- | | |
|---------------|-------|
| a. rural area | _____ |
| b. town | _____ |
| c. small city | _____ |
| d. city | _____ |
4. Has your teacher-librarian completed courses in school library education?
Please indicate the number of units:
- | | |
|-----------------|-------|
| a. 1.5-3 units | _____ |
| b. 4.5-6 units | _____ |
| c. 7.5-9 units | _____ |
| d. over 9 units | _____ |
5. How recent was the last course you completed in school library education ?
- | | |
|----------------|-------|
| a. before 1971 | _____ |
| b. 1971-1975 | _____ |
| c. 1976-1980 | _____ |
| d. 1981-1986 | _____ |
6. How many hours of professional development in school library education have you attended in the last five years ?
- | | |
|-----------------|-------|
| a. 0-3 hrs. | _____ |
| b. 4-8 hrs. | _____ |
| c. 9-12 hrs. | _____ |
| d. 13-16 hrs. | _____ |
| e. over 16 hrs. | _____ |

7. How much time per week is your school served by a teacher-librarian working in the resource centre ?
- a. 25 hrs.(full time) _____
 - b. 20 -24 hrs. _____
 - c. 15 -19 hrs. _____
 - d. 10 -14 hrs. _____
 - e. less than 10 hrs. _____

Part II - Program Information

8. Does your school library resource centre schedule each division into the resource centre for a regular period every week?
- a. yes _____
 - b. no _____
9. Does your school library resource centre schedule groups or classes on a flexible basis for specific purposes as the need arises ?
- a. yes _____
 - b. no _____
10. If you answered yes to both questions 8 and 9 please indicate how many hours per week are regularly scheduled.
- a. 0-3hrs. _____
 - b. 4-8hrs. _____
 - c. 9-12hrs. _____
 - d. 13-16hrs. _____
 - e. over 16 _____
11. If you answered yes to both questions 8 and 9 please indicate how many hours per week are flexibly scheduled.
- a. 0-3hrs. _____
 - b. 4-8hrs. _____
 - c. 9-12hrs. _____
 - d. 13-16hrs. _____
 - e. over 16 _____
12. Does your school arrange time during the week for the teacher-librarian to plan units of study with the classroom teachers ?
- a. yes _____
 - b. no _____
13. If you answered "no", when does the teacher-librarian plan with classroom teachers?
- a. before school _____
 - b. lunch hour _____
 - c. after school _____
 - d. all of the above _____
 - e. other (please explain)_____
-
14. Does your school have a written scope and sequence of research and study skills beginning at the primary level ?
- a. yes _____
 - b. no _____
15. Are these skills taught as separate lessons or are they incorporated into curriculum units of study?
- a. separate lessons _____
 - b. integrated _____

16. Check the statement below that best describes your attitude towards classroom teachers and teacher-librarians cooperatively planning and teaching units of study.

- a. I believe this method is best because it follows the way students will use information skills in real life situations. _____
- b. I believe separate lessons teaching information skills ensure all students are exposed to all skills and are taught them in an orderly sequence. _____
- c. I believe there would be little difference in student learning between the above two methods. _____
- d. I would need more information on the subject before expressing an opinion. _____

Part III - Handbook Information

17. Please check the main reason you purchased Primary Library Activities ?

- a. I was looking for ways to broaden the range of activities that primary pupils perform in a school library centre. a. _____
- b. I hoped it would be a good resource to use as a springboard to develop information skills around classroom units. b. _____
- c. It was the only publication I knew of dealing with primary pupils use of school library resource centres. c. _____
- d. No special reason. I had money at my disposal and felt the title was interesting. d. _____

18. Check the sections of the handbook you have used?

- a. Alphabetization skills _____
- b. Dictionary skills _____
- c. Encyclopedia skills _____
- d. Research examples _____
- e. Independent reading _____
- f. Literature appreciation _____

19. Of the sections you checked above please rank them in order of usefulness. (1 most useful to 6 least useful) You may use a number more than once if you have found sections equally useful.

- a. Alphabetization skills _____
- b. Dictionary skills _____
- c. Encyclopedia skills _____
- d. Research examples _____
- e. Literature appreciation _____
- f. Independent reading suggestions _____

20. Into what subjects have you found activities in the handbook are integrated easily

- a. Language Arts _____
 - b. Social Studies _____
 - c. Science _____
 - d. Other (please explain) _____
-

To explore the subject of how information skills are taught to primary pupils in greater depth it would be appreciated if you would you consent to be interviewed in person.

If you agree please complete the section below, detach it and mail it in the separate envelope provided for this purpose.

(cut along this line)*

Name _____ Phone (area code) _____ no. _____

Address _____
(number & street) (city or town) (province)

Area Code _____

I agree to a personal interview to explore the teaching of information skills to primary pupils in greater depth. by telephone _____
in person _____

ORAL QUESTIONNAIRE

Standardized Format for Conducting Oral Interviews by Telephone

This is Joan Harper calling concerning my thesis study on the extent to which information skills are integrated into primary curriculums. Thankyou, very much for completing a questionnaire for me and for agreeing to be interviewed by telephone. To begin our conversation could I have you describe your present work situation? (What do you teach?)

How would describe the school or schools in which you work? (rural or city? type of clientel served? other characteristics you consider important)

Would you tell me a bit about how you became interested in primary pupils using information skills? (Was it from courses, professional development or other sources?)

As you recall the skill sections of the handbook Primary Library Activities were listed under the following headings: Orientation, Alphabetization, Dictionary, Encyclopedia, Research and Independent Reading. Which section or sections do you consider are most useful?

In general, what information skills do you consider are most important to teach primary pupils? Could you rank them for me and tell me why you chose them?

What method or methods have you found are best to teach information skills to primary pupils? (What about integration into the curriculum?)

To what extent do you observe that most primary teachers integrate information skills?

- 0 - 20%
- 20 - 40%
- 40 - 60%
- 60 - 80%
- 80 - 100%

Do you think a teacher-librarian who is qualified (has formal training plus teaching experience) is more successful in implementing a program which integrates information skills with primary classroom units?

How do you think the amount of teacher-librarian time in a school affects the teacher-librarian's role in implementing information skills with primary classroom units?

Do you consider that publications such as Primary Library Activities facilitate the integration process? How do you think they are used?

Maple Grove School,
6199 Cypress Street,
Vancouver, B.C.,
June 6, 1986.

Dear Educator:

Two weeks ago I sent a questionnaire to purchasers of Primary Library Activities concerning primary pupils conducting research using school library resource centres. I know it is a very busy time of year for teachers but it would be extremely helpful for my study if you could find ten to fifteen minutes to complete this questionnaire. A 100% return would be most useful for the research involved.

If you have already found time to reply please ignore this letter and accept my thanks for having replied so promptly. I appreciate your assistance in this matter.

Yours Sincerely,