DESIGN, DEVELOPMENT AND IMPLEMENTATION OF A RESOURCE-BASED UNIT OF INSTRUCTION: A CASE STUDY

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Design, Development and Implementation of a Resource-Based Unit of Instruction: A Case Study

by

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Abstract

In 1988 the Department of Education for the Province of Newfoundland and Labrador, with the publication of Programs of Studies, announced a major shift in its approach to education in order to prepare its students for the challenges they will meet in the 21st century. It encouraged its educators to teach their students the skills that would enable them to readily access information when needed. This meant that the educators themselves had to apply a new method of teaching their students. This method, the resource-based method, meant that a new orientation from the traditional approach to teaching and learning had to be learned and experienced by all concerned.

Because of the Department of Education's policy statement, the faculty of Mary Queen of Peace School in St. John's undertook to prepare and implement a resource-based teaching/learning experience so everyone involved in the process could profit and grow from it. This study reports on the process involved in developing and implementing a resource-based unit of study for the grade nine level.

Table of Contents

CHAPTER

List of Tables and Figure

CHAPTER I

Introduction

Policies delineated in 1988 by Newfoundland and Labrador's Department of Education mandated a policy for education which called for fundamental operational and philosophic change in the functioning of the province's classrooms. These policies called for an operational move to resource-based classroom management and a philosophic snift from a teacher-based orientation to a learner-based orientation.

This paper describes a case study documenting the development of a unit of instruction which was cooperatively designed and implemented as a demonstration of an effective resource-based learning instrument. The unit consisted of an assemblage of diverse coordinated instructional materials and activities which were developed as part of a total school effort to integrate resource-based instruction in solving specific instructional problems. The unit entitled The Confederation Fight was generated by a team consisting of three grade nine teachers, one special education teacher, and the school teacher-librarian.

This thesis examines relevant social and technological forces emerging within the Newfoundland educational community and society which provided the impetus for the development of these instructional materials, and documents the procedures followed in the design, development, implementation, and

evaluation of the materials.

Historical Background

The Government of Newfoundland and Labrador's Department of Education Division of Instruction, in its Program of Studies (1989-90), stated:

> The elementary school must provide a stimulating and challenging environment for students. Processes and procedures that make it possible for new interests to appear and new purposes to emerge must be used in the classroom. Grouping practices, the functional management of furniture, independent work activities, resource-based teaching, unit study, learning centres, and a general approach to learning that emphasizes the child as a thinking, doing, and feeling learner are essential to elementary education. (p. 39)

The establishment of this policy in Newfoundland's school system presented a challenge for all groups and individuals directly and/or indirectly involved in the process of education. Historically, the learner has been given a passive role in this process. Familiar and vivid is the image of the classroom teacher standing in front of the chalkboard looking down at students seated in straight rows of desks. In this scenario, the teacher talked or wrote on the board and the

students listened or made notes. This procedure has been described by Taylor (1972) in Resources for Learning as the "talk and chalk" approach. It was commonly accepted by educators that a definable body of knowledge existed and that the role of the teacher was to present this knowledge to the student, who in turn was expected to learn it.

However, as Monkhouse (1986) put it, "Change is one of the constants in our lives" (p. 9). Today we are living in an age of "information explosion." Every form of media from the printed word to electronic delivery systems such as radio, telephone, computer networks, television and satellite links are bombarding our society with information. Modern communication systems have evolved to such a point that events which happen in one part of the world are immediately communicated and known throughout the rest of the world. Because information is so widely and immediately communicated, it is virtually impossible to keep abreast of the vast amount of knowledge that is available to us. Moreover, it is unrealistic, and indeed impossible, to attempt to teach all the information that is available.

Boorstin (1980) warned that the "knowledge industry" is being pushed aside by the "information industry." He noted that a very real danger exists that our world is becoming rich in information but poor in knowledge. Linking this problem to schools and school libraries, Hambleton (1986) observed: "Schools, and by implication, school libraries, are being

challenged, as perhaps never before, to respond to urgent proposals for excellence in education and to provide support for lifelong learning" (p. 17).

Educators have become increasingly aware that because of the occurrence of this information explosion, the teaching of children using textbooks as the sole resource for knowledge is no longer sufficient. There is an urgent need to provide supplementary materials that amplify and update information for the students. These materials can take the form of readings, books, articles from magazines and newspapers, audio and video recordings, or any other form of information that provides students with current, accurate and comprehensive data.

A classroom management procedure whose purpose is to provide learners with a variety of pertinent materials along with techniques and resources for implementing them is a process called the Resource-Based Teaching/Learning Approach. In order to achieve success, this approach revolves around each school having a well stocked library resource centre, a properly trained teacher-librarian, and the participation and cooperation of the teaching faculty. It is an approach which requires a redefinition of many of the traditional roles within education. The implementation of this educational approach requires fundamental changes in the roles of the school library and of the school librarian.

The Newfoundland and Labrador Government recognized that

many changes in the traditional Newfoundland school systems are necessary in order to prepare students for successful life in the 21st century. The library was chosen as a logical place to start and the Program of Studies (1989-90) states:

> While a course text is the principal resource in the educational process there is a need for additional resources; to enrich learning experiences, to accommodate various learning styles, and to encourage a variety of instructional approaches. These additional resources can be provided through a properly functioning school library. (p. vi)

This policy statement implied new directions for the school libraries in Newfoundland and Labrador.

Historical Background of Resource-Based Teaching/Learning

Although concepts such as resource-based teaching, the school library as a resource centre, and the teacher-librarian as functioning in a central role within the school curriculum are in the process of being implemented today in schools across the United States and Canada, such ideas were envisioned many years before. Fargo (1913), speaking at the National Education Association (NEA) Convention, proposed the concept of the school library being used as "... a laboratory and a workshop, [a means of] for further achievement" (p.

760).

Hall (1925) explained in the Library Journal the difference between the "old" and the "new" library approach to supporting the curriculum. In her view:

> The old high school library was static. The new is dynamic. The old was largely for reference and required reading in history and English; the new is all things to all departments, if in any way it may serve the school. It is not only a reference library, but a training school in the best methods of using library aids in looking up a topic ... The new library is dynamic, because it is not content with storing, and organizing and recording the loan of books and other material, but because it uses every method known to the best college and public libraries for encouraging their use, stimulating interest in good reading, arousing intellectual curiosity and broadening the horizons of students. (p. 72)

Hall (1925) also went on to explain the necessity for the new library to provide nonprint materials along with the standard print:

> In the new high school library many of our schools have found it well worthwhile to bring together all lantern slides, pictures, victorola records and post cards, and to organize them according to

> modern methods of classification and cataloguing so that they may be available for all departments and at all times as they are not available when kept in departmental collections. (p. 75)

The National Education Association, the Department of Elementary School Principals, and the American Library Association's School Librarians Section in 1925 adopted the Joint Committee on Elementary School Library Standards report. Curtain (1945), the Chairman of the Committee, told of the emergence of the elementary school library as an instructional support agency to the changes in methods taking place in the elementary school. He stated:

> Modern demands upon the public school presuppose adequate library service. Significant changes in methods of teaching require that the school library supplement the single textbook course of instruction and provide for the enrichment of the school curriculum. Children in the school are actively engaged in interests which make it necessary for them to have the use of many books and a wide variety of materials, such as pictures and lantern slides. An essential consideration is that the books and materials be readily available when needed, and under the direction of a library staff which is part of the school organization. (p. 1)

In 1945 the American Library Association (ALA) published

School Libraries for Today and Tomorrow. It defined the educational purposes of the library as:

> Participate effectively in the school program as it strives to meet the needs of pupils, teachers, parents, and other community members. Provide boys and girls with the library materials and services most appropriate and most meaningful in their growth and development as individuals. Stimulate and guide pupils in all phases of their reading so that they may find increasing enjoyment and satisfaction and may grow in critical judgement and appreciation. Provide an opportunity through the library experiences for boys and girls to develop helpful interests, to make satisfactory personal adjustments, and to acquire desirable social attitudes.
>
> Help children and young people to become skilful and discriminating users of libraries and of printed and audiovisual materials.
>
> Introduce pupils to community libraries as early as possible and cooperate with those libraries in their efforts to encourage continuing education and cultural growth. Participate with teachers and administrators in programs for continuing professional and cultural growth of the school staff. (Committee on Post-War Planning of

the American Library Association, pp. 9-10)

In 1960 the American Association of School Librarians (AASL) published what many considered to be the most important document in the history of school library development in its Standards for School Library Programs. This became the measuring stick for all school library programs in the United States of America and influenced the thinking of educators in Canada. This document states clearly that the school library should serve as both a source and force for educational excellence:

> [It is] of importance to all citizens ... that our schools have the resources needed for teaching and learning.
>
> Whatever for the soul-searching regarding the education of youth may take, sooner or later it has to reckon with the adequacy of the library resources in the schools. Any of the recommendations for the improvement of schools ... can be fully achieved only when the school has the full complement of library resources, personnel, and service ...
>
> In the education of all youth, from the slowest learner in kindergarten to the most intelligent senior in the high school, an abundance of printed and audiovisual material is essential. These resources are the basic tools needed for the

purpose of effective teaching and learning ... the scope of knowledge within the boundaries of classroom instruction, superior though that instruction may be. Through the school library these boundaries can be extended immeasurably in all areas of knowledge and in all forms of creative expression, and the means provided to meet and stimulate the many interests, appreciations, and curiosities of youth ...

Educational leaders stress the point that the school library is one of the requirements for quality education ... the school library program, embracing teaching, guidance, and advisory services, forms a unique and vital part of quality education. (Commission, 1945, pp. 1, 3-4)

The standards of the 1960s stressed that:

... good school library programs make audiovisual materials easily accessible for use in the library, regardless of the prevailing administrative pattern of these materials. (Commission, 1945, p. 12)

The American Association of School Librarians (AASL) and the National Education Association's (NEA) Department of Audiovisual Instruction issued, in 1969, joint standards entitled Standards for School Media Program. New professional terminol-

ogies were adopted by these standards:

> In this publication, the term media refers to printed and audiovisual forms of communication and their accompanying technology. Other basic terms include media, program, media specialist, media centre. When reference is made to the next larger organizatIonal unit, system media center is used.
>
> The terms media program, media specialist, and media center are used in this publication for purposes of convenience, consistency, and clarification within the context of the standards, and are not employed with an intent to mandate any particular title or terminology. (pp. xi-xii)

The AASL and the Association for Educational Communications and Technology (1975) published revised standards, Media Programs: District and School. These standards "call for media programs that are user-centered, that promote flexibility in practice based on intelligent selection from many alternatives, and are derived from well-articulated learning and program objectives" (p. 107).

The school library media program's major purpose was to have the educational experience of all learners improved by building "bridges between content and context, purpose and procedure, self and society (AASL, 1975, p. 4).

Canada did not receive its first Canadian standards until 1967. It was essentially a mirror of the American campaign within the school library system. It too considered library as an essential element of the school which it services.

Standards of Library Service for Canadian Schools (1967) described the main function of the school library as being unique in that it is "to serve the instructional needs of a limited clientele--students and teachers" (p. 5). It defined the responsibilities of provincial officials, school board trustees, superintendents, principals, teachers, and school librarians.

Media Canada: Guidelines for Educators (1969) was released by the Educational Media Association of Canada. Non-print materials were given a high status in this publication as compared to the Standards of Library Service for Canadian Schools (1967). The 1969 standards diagram was not associated with the school library as such. Rather, it proposed that a separate facility with its own personnel, an educational media centre, be set up.

Over the years there have been a number of changes that have literally re-built the thinking and attitudes of those directly involved with learning and the library. Standards have been raised within and around the school library. The library, along with the classroom teacher, the teacher-librarian and the school principal, have become the students' main resource for a resource-based system.

The Newfoundland and Labrador Department of Education, in its Program of Studies (1988-90), mandated a move to resource-based classroom management within the schools of Newfoundland and Labrador. Responding to this policy, in the fall of 1988, a task force was established at Mary Queen of Peace School in St. John's, Newfoundland, for the purpose of designing and implementing a series of resource-based learning materials which would integrate systematic acquisition and organization of information by learners with relevant subject matter outlined in the curriculum. This task force was inaugurated by the school principal in consultation with the faculty, was coordinated by the school teacher-librarian, and involved the active cooperative participation of all faculty members.

The task force established a structure which subdivided the problem into 10 groups, one for each grade level. Each group was made up of the teachers of that grade level and the teacher-librarian. Each group was given the assignment of producing a set of learning materials for their specific grade level. These materials were to provide the learners with appropriate active learning experiences which would integrate library and information gathering skills with a specified component of curriculum subject matter.

One of the groups which was made up of three grade nine teachers, one special education teacher, and the teacher-librarian, produced an instructional unit entitled The Confederation Fight. This paper is a case study report of the

design, development, and initial implementation and evaluation of this instructional unit.

CHAPTER II

Review of the Literature

The proliferation of information through the rapid acceleration of practically all communications technologies has lead to decisions in education which call for fundamental changes in classroom management and school structure and organization. However, although technology is providing a continuously widening array of means for different teaching and learning techniques, fundamental physiological and psychological processes for teaching and learning remain the same. This chapter first examines literature related to these fundamental concerns: the nature of teaching, and the nature of learning.

Literature related to emerging technologies and the resultant pressures on school systems to change is next examined. Resource-based learning, educational technology, information technology, and the additional roles and role changes required of the learner, the classroom teacher, the teacher-librarian, and the school principal are discussed.

The Nature of Teaching

Most educators agree that the teaching-learning process involves more than just the basic transmission of knowledge from an informed source (the teacher) to the ignorant receiver

(the learner). There is much more to be considered, including variables such as the teacher's performance, method and style of teaching; personalities of the teacher and students; and relationships between the teacher and those students. These variables, as well as many others, must be included whenever evaluating teaching and learning. If the many distractions that can enter a learning environment are added, and the range of abilities that a class of pupils may have are considered, it becomes clear that the teaching-learning process is not simple to analyze.

Taylor (1972), in his book Resources for Learning, says:

> Children learn in part from "being told," in part from "an active, personal interaction with people and things" (which we call "play" when children are tiny, and "discovery" or "experience" as we grow older). For severely practical reasons schools in the past have emphasized the "being told": if children are in any case to be gathered together into schools, what cheaper than that their supervisors should talk to them, or more orderly than that they should sit attentive in desks. (p. 233)

The image of teaching represented by an active teacher and a passive class seated in straight rows is no longer acceptable in our changing society. Travers (1970), in his book Fundamentals of Educational Psychology, stated that in order for a child to learn the most he/she possibly can, that

child must experience active doing. This doing "self-activity," and the best way to channel it, has become one of the major issues in any investigation of teaching. "Teaching is not merely inculcating subject matter, nor conveying information, nor transmission of knowledge, but it also produces comprehension and a personal desire to continue self-improvement, to direct oneself toward a constantly deepening maturity" (p. 23).

In the past and even more so today, society has allocated more responsibilities to the teacher. With the shift in traditional roles of families and their members, many of the things that were once taught and learned within the realm of the family have now been transferred to the teacher. The effective and successful methods a teacher uses to communicate information or concepts to be taught are particularly critical to the ultimate success or failure of the learner and his/her ability to cope with today's societal demands.

Scheffler (1965), in Philosophical Methods of Teaching, said that teaching is an activity directed towards the achievement of learning and must be practiced so that the student's intellectual integrity and capacity for independent judgement are respected. What kind of learning is desired and how is it best achieved are some of the questions Scheffler asks. In attempting to answer these questions, he identifies and discusses three fundamental models of teaching.

The first is described as the "impression model," which

looks at the teacher as the sole dispenser of knowledge. In this model, information is selected and delivered to the learner by the teacher. The learner is expected to receive and absorb knowledge or information.

The second is referred to as the "insight model," which implies that knowledge is essentially vision or enlightenment and cannot be divided into elementary units. In this model, the teacher role is merely to provide stimulation and prompting.

The third is called the "rule model," whose attributes assume that it is the development of reason within learners which provides learners with the ability to recognize and follow general rules or principles.

Scheffler (1965) discussed the strengths and weaknesses of these models, and he pointed out the necessity for incorporating all of them into the teaching/learning process. He emphasized that teaching and learning go hand in hand, almost inseparably. He noted that it is very difficult to examine one of these aspects without looking at the other.

Wallen and Travers (1963) examined this teaching/learning process and summarized six significant principles of learning from which important teaching methods should be derived:

1. Teachers should reinforce desirable behaviour. Obviously, different teaching methods use many different kinds of reinforcement, and they use them to a greater or lesser extent. These may range

from the minimal reinforcement normally found in the standard lecture method, to the belief by the teacher that provision of vigorous learning activities involving student participation generate their own intrinsic reinforcement.

2. Teacher skills in arousing learner motivation are aids in the attainment of learning goals. Motivation is, and must be, a central theme in any theory of teaching but the choice of motives incorporated in learner arousal should be left to the teacher's discretion. A teacher should use those means that are best suited to his personality and which experience has informed him will be most effective in motivating his students.

3. Practice by learners facilitates the transfer of knowledge. Good learning materials are designed to help students to progress professionally, to adjust emotionally, and to grow intellectually. The teacher's choices become those of deciding which are the most effective processes in assisting students to transfer their acquired learning to the application of new problems.

4. Teachers must accept and provide for individual differences. A teacher's concept of individual differences will affect the choice of methods and the manner in which these methods are used. For

example, should he teach the class as one group, or should he divide the class into different groups according to ability and achievement? Will he attempt to provide as much individual instruction as is needed?

5. Imitation is a powerful agent for learning and care should be taken that emphasis on other kinds of learning does not mean an elimination of demonstration as a means of learning by the pupil, particularly for psychomotor and affective learning.

6. Controlled pupil activity should be encouraged. Whenever feasible, pupils should make the actual responses needed to learn a task since practice in actual performance of a task facilitates comprehension, retention, and transfer. (pp. 494-500)

The nature of the teaching process is more complicated than the mere telling, directing and assigning of material to learners. Subject matter content, as well as learner attitudes, personalities, and opinions must also be weighed and evaluated on an ongoing basis in order to manage this complex interactive procedure.

There can be no one ideal model for all teachers, nor is there one ideal teaching method, but research suggests that if progress is to be made in designing theories of teaching on a

realistic and productive level then it must be done in close union with the principles of learning.

The Nature of Learning

Travers (1970) said that man as an educator is joined with man as a philosopher, and as he sees human nature, so he sees the nature of learning.

> Consequently learning is viewed as a mechanical process whereby a given stimulus causes a given response. Or learning is viewed as a cognitive, problem-solving process whereby man actively seeks and uses environmental clues that enable him to form concepts, solve problems, and think creatively. (p. 183)

Learning involves uncountable variables, according to Klausmeier (1962) in his book Learning and Human Abilities. He grouped these variables into seven categories:

1. The characteristics of the learner, such as developmental aspects.
2. Characteristics of the teacher.
3. Classroom interaction.
4. Characteristics of the learners as a group.
5. The physical setting.
6. Outside influences upon teachers and learners.
7. The nature of the learning task itself.

Denemark (1961), in Human Variability and Learning: Implications for Education, commented on six kinds of human variability that seem significant for learning:

1. **Differences in perception.** People behave because of what appears to them to be true, and consequently students learn differently in a class, which, to an observer, presents identical elements.

2. **Differences in types of intelligence.** A school population has many kinds of ability and many levels of talent. Intelligence and excellence exhibit many dimensions.

3. **Differences in maturity levels.** There are important variations for all ages in attention span, muscular self-direction and the ability to understand abstractions. These variations have enormous implications for the selection of materials and methods.

4. **Differences in rate of maturity.** There are wide variations in the rate of development among individuals within the same age range. Objectives, materials, and methods must be appropriate for the physical, mental, social, and emotional level of the child.

5. **Differences in the demands of society.** Variability is not only individual, it is also social. The demands of society change, and consequently the responses of students must likewise change. Otherwise education can only prepare pupils for obsolescence. Not only must the school adapt to change, but it must teach its students how to change, how to

relearn. A great task for education today is directing students to learn. In a time of rapid and radical change nothing is more important for the schools.

6. **Differences in objectives.** Individuals have unique needs and they search for unique objectives to satisfy these needs. Teachers and students have different objectives and the degree to which these differences are understood will determine the success of instruction and the extent of learning.

Gagne (1965), in The Conditions of Learning, described a hierarchy of eight distinct types of learning:

1. **Signal learning.** This is the conditioned response type of learning whereby a neutral stimulus acquires the ability to evoke a response, usually emotional.

2. **Stimulus-response learning.** Precise muscular movements are made in response to specific stimuli. This class of learning differs from signal learning in that it is muscular rather than emotional.

3. **Chaining.** This is a sequential connection of two or more previously learned stimulus-responses.

4. **Verbal association.** Gagne explains this as a subvariety of chaining, differing in that the chains are verbal.

5. **Multiple discrimination.** Individual chains are linked by combining distinctive stimuli with an identifying response. An example given is that of a youngster learning to

identify by name all the new car models produced in a year.

6. **Concept learning.** This type of learning is dependent upon the internal neural processes of representation. A previously learned stimulus is encountered in a variety of circumstances.

7. **Principle learning.** This is a chain of two or more concepts.

8. **Problem-solving.** By combining known principles into new elements, the learner is able to master unique problems. Gagne's hierarchy of learning implies that each level of learning requires its own strategies, instructional approaches, and media formats.

Travers (1970) commented on how interesting it was to follow the thinking of learning theorists as they analyzed the causes of behavioral modifications. He noted that while the process of learning remained the same for all humans and under all conditions, the form of learning and the learning product could differ a great deal. He asked the question, "Why are theorists so certain that the process of learning is identical regardless of the manifestations"? He indicates that the answer to this question lies in the "characteristics of learning," which he describes as the constants in any learning activity. To help clarify this he describes an example of a person attempting to satisfy a need. If he discovers that this goal cannot be achieved immediately and directly, but is blocked, he finds he must alter or modify his behaviour (learn

new respo:ses) to remove the blockage. He again tries for the goal using a different behavioral pattern. He either succeeds or fails. If he fails then he must look for another response pattern. However, if he reaches his goal then pleasure of success and the satisfaction of fulfilment will cause that person to repeat that behaviour on similar occasions. Although these characteristics of learning may be referred to in other terms by different writers, they are essentially the same, as are the results. According to Travers, basically the elements that appear are as follows:

1. A motivated learner. Learning is based upon needs that emerge because of some frustration. Motive is not an accidental byproduct of learning but is indispensable to the process.

2. Environmental stimuli. The individual's environment does not consist of a series of unrelated stimuli. The effective situation is a pattern of influences that depends upon the relationships among stimuli.

3. Purposeful activity. The individual selects a response pattern that leads to a goal. Such activity is not random but meaningful. There is organization in the individual's search for the goal. As learning continues, both behaviour and situation change: the situation is clarified and behaviour becomes more organized.

> 4. Consequences of goal achievement. Motives arouse tensions, tensions cause activity, activity leads to goals, and tensions are reduced. But this is not an automatic process. Learning is possible only if the purposes of goals are understood, that is, to satisfy the individual's needs. This sense of satisfaction enables the person to discover that his activity is effective. (p. 201)

Experts agree that the fundamental skills required for teaching are basically the same today as they were at other points in history. This is also true for the skills required of learning. It is difficult to discuss one without including the other. Although the basic roles of teachers and learners remain the same, new roles for each are now added to adapt to new societal conditions. These conditions call for a shift to a learner-centered emphasis and the teacher is seen now as a facilitator in the learning process. Such a shift in the approach to education calls for an alternate course from the traditional one, an approach which puts the learner in the forefront. The resource-based approach is such an alternative.

Resource-Based Learning

Resource-based learning strategies have been advocated by many leading educators as a means of alleviating shortcomings inherent in a teacher-based learning strategy.

The Commission On Instructional Technology (cited in Tickton, 1971), stated that "researchers in human learning agree that individuals differ markedly in the ways they learn, in the speed at which they learn, in their motivation to learn, and in the way they desire to learn" (p. 17).

Davis (1980) indicates that there is no single teaching that will work best for all learners. He said that "the 'ideal' class of 25 students who are on the same level and who progress at the same rate is a myth" (p. 2). Instruction must be changed and molded to meet the individual differences of the learners. Research has shown that people learn in many different ways and that each person has a best way of learning.

Taba, Durkin, Fraenkel and McNaughton (1971) declared that:

> Since we know so little about diagnosing individual optimal ways of learning, the activities should provide the variety in both process and materials so no individual is deprived of his only possible way of learning or of his best way of learning. (p. 40)

Individual opportunities for learning appear to increase when the learner is exposed to a wide use of instructional resources. Beswick (1977) states:

> The glory of the audio-visual media is the contribution they bring to the teacher's communication

> skills. Pictures, still and moving, can form and excite through the eye, making real and vivid what would take a tedium of words to describe; overhead projectors provide a more efficient, more stimulating and admirably repeatable blackboard; records and tapes enable words, music and sounds to be replayed at will; and all can be combined into patterns and programmes that do more than simply reinforce and enliven a lesson given to the traditional style. (p. 35)

Educators agree that learning is a complicated teaching/learning partnership and that there is still much to learn about this process. However, it is safe to say that learning takes place on different levels and in different ways depending on the individual.

Although the old adage "the old ways are the best ways" may have served teachers in the past, we now find ourselves in the middle of an "information explosion," that brings with it new problems, new opportunities, and the necessity of finding new solutions to old problems.

People of all ages are being bombarded with information from all forms of media. Twenty years ago Hilliard (cited in Toffler, 1970), was quoted in Future Shock as saying:

> At the rate at which knowledge is growing, by the time the child born today graduates from college, the amount of knowledge in the world will be four

> times as great. By the time that child is 50 years old it will be 32 times as great, and 97 per cent of everything known in the world will have been learned since the time he was born. (p. 137)

The child that Hilliard (cited in Toffler, 1970) talked about is about to graduate from college. He/she will enter a world that is vastly different from the world his/her parents found. Along with the skills his/her parents needs for success, the child will need many new sets of skills if he/she is to have success under these new conditions. In this period of technological change and informational explosion, he/she will need a solid foundation in a variety of information skills. In order for the schools to prepare students for the real world, it appears certain that the approach to teaching and learning must be re-evaluated. The prevailing formal school approach is no longer sufficient. Educators must take into account the new technologies and the vast changes that are resulting in today's society. Beswick (1977) addressed this fact:

> Once, what a child learned came partly from parents, partly from participation in local society, partly from practise, and much from part of what a child knows comes directly from the mass media ... Our young people see and hear a very great deal of radio and television, together with movies and records, and these form an important element in

> their lives. They are accustomed to presentations that are professionally, even slickly, performed, and which make the average class lesson seem amateur ... (p. 34)

Beswick (1977) was not saying that teachers should try to compete with Hollywood, nor was he saying that we should abandon all the traditional ways of doing things. He, like so many others, was saying that the rate at which humans are acquiring new knowledge is tremendous and that this is applying enormous pressure on educational systems to adapt these forces and find new ways to prepare students for a changing world.

Although teaching and learning based on single textbooks have served our society in the past and will continue to play a part in the teaching/learning process, this teaching method can no longer stand alone. Deighton (cited in Tickton, 1971) talked about the many qualities of textbooks in a positive context. He pointed out that textbooks provide everyone concerned with an orderly introduction to a given subject, provide review, a contiguity of text, illustrations and comparisons (p. 508). However, he went on to say that the textbook alone is not enough for successful instruction. Doyle (cited in Davis, 1971) agreed when he said that "the use of textbooks alone, regardless of their worth, does not suffice and can no longer be considered adequate as a medium of instruction ..." (p. 148).

Davis (1974) professed that textbooks should be used as points of departure for learning, in which they serve in outlining, and in identifying topics and concepts that are worthwhile exploring. They should also be used as a base by which students can move on to other instructional resources (p. 8).

Jarolimek (1967) agreed that the old approach in which the teacher used only the textbook as the source of reference is no longer sufficient. He stated that the teacher must reach out beyond the textbook and include the use of a broad spectrum of learn .ng resources as he/she works with the pupils (p. 542).

Teachers are be!ng challenged by educational research, new curriculum planning, and by parents and teachers to devise ways to stimulate and spark the interest in their students above and beyond the covers of the textbook. Brown (1986) said: "The textbook is recognized as an important resource, but only one of many, for teachers are asked to provide a variety of experiences for learners of all ages, particularly when new concepts are being taught" (p. 7).

Brown (1986) makes the point that chalk and talk are no longer enough to teach the learners of today. Teachers are being asked to design educational experiences which will place the learner in the centre of the teaching/learning action where they can take an active and dynamic part in the learning experience. This placing of the student as the central focus

of the learning process requires of shift of emphasis in which a variety of resources and methods of support for the activities of the learner is provided.

Taylor (1972) said that at present we have in place a teaching-based system of learning. He stated, "If we were instead to arrange things for 'active, personal interaction with people and things' we'd have a resource-based system of learning" (p. 233).

A move from a teacher-based system to a resource-based system of learning has important implications. Resource-based learning, according to Beswick (1977), is a term with a variety of meanings:

> Some people use the term to mean learning that is closely sequenced, teacher-directed, and programmed; others use it for very open ended work based on enquiry and discovery techniques, with a considerable element of student choice. As a blanket term, "resource-based learning" thus covers a wide spectrum of possibilities and modes, according to the temperament and professional decision of the teacher and the circumstances of the subject matter, class and school. (p. ix)

Beswick (1977) goes on to explain that all variants assume that rather than learning the traditional way, with the teacher doing the expositing, "the student will learn from his own direct confrontation, individually or in a group, with a

learning resource or set of resources, and activities connected with them" (p. x).

The student does not have to restrict his/her work to the classroom, the laboratory, a separate "resource area," or the library. Learning can take place inside or outside the school building itself. No matter where the work is, the student takes an active role, proceeding through a series of planned steps, or making his/her own decisions in problem-solving situations.

Beswick (1977) explains that resource-based learning is not intended to be the only type of learning experienced by the learner, nor is it a replacement for "all that has been traditionally offered." This is true also of the teacher's role. The teacher is not being replaced in any way using the resource-based approach but rather is "given a further strategy to employ."

The "learning to learn" theme which Beswick (1977) refers to in his book (pp. 9-30) is linked directly to a resource-based approach to teaching and learning. The basic assumption of this approach is that one must discover for oneself, or at least be led to a place of discovery. Bruner (cited in Beswick, 1977) stressed:

> The development of an attitude towards learning and inquiry, towards guessing and hunches, towards the possibility of solving problems on one's own ... To instill such attitudes by teaching requires some-

> thing more than the mere presentation of fundamental ideas ... an important ingredient is a sense of excitement about discovery of regularities of previously unrecognized relations and similarities between ideas, with a resulting sense of self-confidence in one's abilities. (p. 8)

Beswick (1977) continues by stating that a resource-based approach to the problem of instruction can basically be described as providing intervention to counteract "discontinuities between what is known and what is taught" in a world where the knowledge base is rapidly increasing and is predicted to continue to do so. He said:

> The student is to be led to see himself in the discovery mode, to form the basic concepts that enable him to discover, to understand the subject field as it currently is, and to understand some of the attitudes and approaches that will lead to further understanding and later changes of emphasis. (p. 9)

Successful implementation of a resource-based strategy of learning requires examining the relationship between education and information technology.

Education and Information Technology

In 1984 the Council for Educational Technology (CET) made some very interesting observations with regards to the overall perceptions of information technology. The effects that information technology has had on society and in turn education are no less than profound. As a direct result of this technology the relevance of content of existing subject areas is being questioned. Concern over the need to introduce to learners some sort of general information handling and problem-solving skills within the educational system is growing.

There is an increasing understanding and realization of the potential possibilities that technology has for a more effective communication of information. The implications related to the variety and flexibility on methods of teaching and learning are very exciting.

The CET made its position very clear concerning the directions teaching and learning methods should be taking as a result of information technology. It stated:

> To some extent this is linked to the need to introduce new skills and knowledge into the curriculum and the use of information technology itself allows this to be done in appropriate ways. In particular, it allows for increased opportunities for individualized and independent forms of study. It

> can be said to provide a new lease on life to resource-based learning. This is made possible by the considerable interactive capability of the technology, the combination of developments in telecommunications, video and computing, that make possible the creation of powerful new electronic information and communication systems. (Thompson, 1984, p. 197)

The CET made a strong case for its position by pointing towards a number of facts which could not be overlooked or denied. Required equipment is easily available and the cost is decreasing as the demand is increasing, the result of which is a transformation in our ability to access and process information. There are available new capabilities in accessing information, as well as new capabilities for storing large amounts of data which have available quick and logical retrieval. Technology is now offering the normal user information from a wide variety of sources and formats which are delivered almost instantly, providing practically anyone who is interested the most recent current information available.

Bruner (1963), in his Process of Education, talked about the learning to learn concept as a transference from one learning experience to another. He stated:

> Virtually all of the evidence of the last two decades on the nature of learning and transfer has

> indicated that, while the original theory of formal discipline was poorly stated in terms of the training of faculties, it is indeed a fact that massive general transfer can be achieved by appropriate learning, even to the degree that learning properly under optimum conditions leads on to "learn how to learn." (p. 6)

The process of learning has been re-visited through resource-based learning. The focus of emphasis is changing from that of mastery of content to the process of learning itself. The new goal is to equip the learner with tools that will alow him/her to locate, diagnose, and evaluate information from any media format. Haycock (1981) said that learning is "the process of unlocking knowledge and critical thinking" (p. 5).

In the past, knowledge and information came from limited sources, but this is not the case today. Information is all around us. The telephone, motion picture, radio and television--among the more prominent of media--have become standards as sources of information to practically everyone in North America. Formal education is further impacted by the availability of computers and their pre-produced programs; and the availability of microfilm and microfiche for information storage and retrieval. Additionally, the older familiar media such as slide-audio tape productions, filmstrips and motion pictures are more readily available, higher in technical

quality, and embrace more aspects of the curriculum than previously.

New instructional formats which can take advantage of the newer technological advances are needed within the educational structure to facilitate the process of "unlocking knowledge." As pressures to shift emphasis from a teacher-centered instructional system to a learner-centered system have increased, both teachers and learners have widened their demand that more and varied resource materials be made available to them.

As these resources become available, there is a need for them to be centralized in locations which are easily accessible to all concerned. Most experts agree that the obvious place for such storage within a school setting is the school library. As the function of the materials storage areas have changed and evolved, new titles for centralized materials collections have been used. These included "media center," "resource center," "school media center," "school library media center," or simply the "library." Whatever its official title, schools have been placing increased emphasis on developing an accessible location where teachers and learners can find materials and resources of all forms of media, in addition to the traditional books and printed materials. Media such as filmstrips, audio tape, slide-tape packages, phonograph records, models, films, videotapes and other non-traditionals are or should be located in such a center. The

role of the school library, along with the personnel directly and indirectly related to it, have either changed or must soon undergo role change to meet the emerging needs of the learners and teachers.

The Role Changes Involved

Obvious reasons for the changing focus of the library/learning resources center are to provide better assistance to the learner in his/her pursuit of knowledge and development of his/her informational skills. However, how does this resource-based approach to teaching affect the roles of the personnel concerned? What new functions does this educational approach require of the teacher-librarian, the teacher, and the principal? More importantly, what has to happen to bring about this change from a traditional teacher-based system to a resource-based system?

In June 1988 the Canadian School Library Association published its Guidelines for Effective School Library Program (Appendix B). It stated that a major goal of education in Canada was to prepare students for the 21st century, and in order to do this we must "emphasize the information-handling skills that are crucial to the processes of critical thinking and problem-solving."

The Association emphasized that "the school library is an essential component of the educational process." This goal would be achieved by making sure that the program and services

of the school library could/would/should support the instructional program of the school.

> The role and responsibility of the school library lies in the development of resource-based programs that will ensure that all the young people in our schools have the opportunity to learn the skills that will enable them to become competent users of information. (School Libraries in Canada, 8(2), 1988, p. 30)

In order for the school library to fulfil its function, it is necessary that the programs and services of the school library have the full administrative staff and financial support necessary for it to service the instructional curricula of the school.

Where and how changes take place, coupled with the roles and responsibilities of those involved in shaping the school library, are one in the same as those directly involved in the shaping of the education system itself.

> ... shaped by policy set at national, provincial and local levels, by professional standards and research, by educational objectives and curriculum requirements, and by the expectations of the administration, the staff and the community. Basic levels of support are required in order to develop library programs and services that are congruent with the educational goals of the school, the

> curriculum, and the need of the learners. Support from the provincial ministry of education, from the local school district, and from the administration and teaching staff of the school are all important to the success of the program. (School Libraries of Canada, 8(4), 1988, p. 30)

The Teacher-Librarian

Change and cooperation seem to be the key commitments for those concerned in implementing resource-based learning. The role each participant plays in the process must be appreciated by every other participant. The role of the teacher-librarian has been changed from that of the traditional librarian who taught "library skills" basically by showing a learner how to use the library. The new role outlined by Haycock (1984) stated: "The teacher-librarian's major task is to work with classroom teachers to plan, develop, and implement units of study which integrate research and study skills" (p. 94).

These skills enable the student to locate and use materials taught by the teacher in a classroom setting and/or by the teacher and the teacher-librarian in a resource center. But Haycock (1985) suggests that now the time has come to move on to "informational skills: assisting young people to develop the skills necessary for purposeful inquiry, informed decision-making and lifelong learning" (p. 11). She went on to emphasize that it is good that the importance of informa-

tion skills is being more widely recognized but that the process is not being clearly defined and focused within schools. She warns that, "Without a school-based continuum of information skills, classroom teachers and teacher-librarians face the difficulty and even professional danger of operating in a vacuum, without a framework or 'curriculum,' if you will" (Haycock, 1985, p. 11).

Haycock (1985) also expressed a definite view of the role of the teacher-librarian within the resource-based approach. She described the teacher-librarian as a "specifically trained" professional working in cooperation with other professionals, whose common goal is that of teaching students how to access and use information in an efficient and effective way. She stated that "the teacher-librarian should be able to specify and articulate information skills and guide their sequential development" (p. 11). Haycock noted that information skills were understood more easily if organized into smaller "discrete parts," and outlined an overview of six broad categories of skills that students need:

1. **Resource Center Orientation:** Examples of this included resource center, physical layout, basic procedures, etc.

2. **Research Strategies:** Examples of this included defining the problem and its scope along with procedures to address it, knowing where and how to start, where to look next, steps to follow, etc.

3. **Locating Information - General and Subject Sources:** Examples of this included use of the card catalogue and indexes to encyclopedias, use of magazine indexes, use of specialized reference materials, maps and globes, etc.

4. **Acquiring and Analyzing Information:** Examples of this included using key words, skimming and scanning, listening, viewing, comparing and contrasting, recognizing bias, etc.

5. **Organizing and Recording Information:** Examples of this included taking notes, keeping a record of sources, crediting direct quotes, etc.

6. **Communicating and Presenting Information:** Examples of this included written and oral reports, slide-tape presentations, debating, etc.

It was stressed that application of such a list does not allow maximum benefits if it is not used in close conjunction with the instruction going on in the classroom.

Haycock (1985) states that the exact grade level at which information skills are introduced is not important; "what is important is that a school have a plan for the sequential development of information skills and that the plan reflect the goals and priorities of the school" (p. 11).

The Skills Continuum

An often quoted and well-accepted list of criteria or principles for effective skill development used by Haycock

(1985) is:

1. The skill should not be taught as a separate exercise. Rather it should be taught functionally, in the context of a topic of study.

2. The meaning and purpose of the skill must be understood by the learner. That way he/she will form correct habits from the beginning.

3. Repeated opportunities are needed by the learner in order to practice the skill, with immediate evaluation. That way he/she knows where he/she has succeeded or failed.

4. Not all members of any group will learn at precisely the same rate or retain the exact amount of what they learned. Therefore, the learner needs individual help through diagnostic measures and follow-up exercises.

5. Skill instruction should be presented at increasing levels of difficulty, getting more difficult and more complex. As the learner advances in school, the resulting growth in skills should be cumulative. Each level of instruction should be built and reinforced on what was previously taught.

6. At each stage the learner should be helped to generalize the skills by using them in a variety of situations. The maximum transfer of learning can be reached this way.

7. In order for skills to be taught as they are needed by the learner the program of instruction should be flexible. Many skills should be concurrently developed.

If one accepts these basic principles, it follows that in order to ensure that learners are advancing from one plane to another along a continuum leading to independence, an information skills continuum should be set up in each school. This skills continuum, if properly implemented, ensures that the teaching of some skills are not repeated year after year to some learners while other skills are not presented at all.

Haycock (1985) states clearly who should initiate such action: "The teacher-librarian, as stated, must take the initiative and be prepared to provide leadership and expertise in the articulation and specification of information skills" (p. 12). Haycock outlined a basic five step process with which to initiate an information skills continuum for the school. She noted that the process could take place before and after school and/or at lunch hour.

Step 1 - Locate a list of information skills.

Step 2 - Provide only the appropriate sections to groups of staff to react to. It would be inappropriate to expect a grade eight teacher to react to appropriate grade three skills. Work with specific grades or groups depending on the school size. "This is most effective if done sequentially." Come to some consensus with each group. Have each grade level provide input/feedback both at a grade level below and a grade level above the level they are presently teaching. "The role of the teacher-librarian as both a team partner at each grade level and as a liaison between grade levels is key to the

development of the continuum" (Haycock, 1985, p. 12).

Step 3 - Ratify the initial draft sections of the continuum from the primary and intermediate staff.

Step 4 - Take the complete draft to the entire staff and get their reaction. Pay particular attention to grades four and seven, which are the transition years.

Step 5 - Seek final ratification and even adoption as school policy if need be. It must be emphasized that the teachers must accept shared responsibility for information skills development.

The size of the school and the approach taken will determine the amount of time required for such an undertaking. It was emphasized that: "As students gain confidence in what they do and how they do it, they are freed to absorb information, process it and use it in a meaningful way" (Haycock, 1985, p. 12).

According to Haycock (1985), three levels of service should be provided by the teacher-librarian and the school resource center:

1. **Curriculum Implementation** - Included here were: planning and developing curriculum; cooperative program planning and team teaching; and professional development services for teachers.

2. **Curriculum Enrichment** - Included here were: promoting material and services; guidance for readers, listeners, and viewers; information services; designing and

producing materials; and cooperating with outside agencies.

3. **Curriculum Support** - Included here were: administration of the resource center; and selecting, acquiring, organizing, and circulating materials.

The teacher-librarian must know the curriculum as seen through the school-based programs and must be able to diagnose curriculum in order to access entry points for the development of information skills through cooperative program planning and team teaching.

Curriculum Partnership

To ensure that the school library is established as a mainstay in the overall process of education within the school, the teacher-librarian must be an active partner in the curriculum. That is to say, the teacher-librarian must be involved in the planning and teaching of the curriculum to insure that the information skills are being included.

The Learner

With acceptance of the resource-based approach to learning and teaching, the traditional roles of the student (which were in most cases passive ones) and teacher (which very often involved lecturing from text) both must undergo a drastic shift in emphasis.

In her address to the International Council for Educational Media (ICEM) Annual Conference, Bireaud (1975) made

some observations about the role of the teacher in a resource-based system. She first stated that the school and society relationship essentially remained unchanged whether the system retained its traditional structure or became resource-based. Some of the more obvious changes in classroom method brought about as a result of any change over to resource-based system include:

1. As a result of more modern procedures of cataloguing and retrieving information, students are able to take at least partial responsibility for their own development.

2. Students are no longer forced to work within one class group. They are given more freedom to move around in order to work alone or in a group whose members frequently change.

3. Students spend less time listening to lessons prepared by the teacher and more time discovering for themselves.

The Teacher

The traditional role of the teacher in a resource-based system is of necessity altered considerably. With the resource-based approach the teacher wears many hats, including counsellor, philosopher, guide, and friend to the student. The teacher's role changes from that of a presenter to a helper or guide so the student can learn how to acquire information and knowledge. In some instances the teacher must

give technical assistance so the students can express themselves and communicate through a variety of media forms.

As a "participant observer" the teacher must pay much more attention to individual differences and be able to diagnose learning difficulties which are experienced by some students. It is also important that the teacher have an understanding of group dynamics and can work with students as a group leader. All of this is quite different from the traditional role played by the teacher in the closed door sanctuary of the teacher-oriented classroom.

Just what went on behind the closed doors of many of the traditional classrooms has been the topic of a number of studies over the years. Jackson (1968), Sarason (1982), Crocker (1983) and Goodlad (1984) made a number of common observations including:

1. Teachers preferred to teach in a classroom that could be called their own and have all that is needed by the teacher in that classroom.

2. Teachers put a lot of faith and trust in the textbook and tend not to waiver too far from its directions and procedures.

3. Teachers preferred to teach with just themselves and the students in the class. Other teachers or adults were not wanted within the classroom by many classroom teachers.

4. Teachers considered themselves to be the main distributer of knowledge, exhibiting an attitude that "if they

don't say it then the students won't learn it."

5. Teachers did most of the talking in the classroom.

6. Teachers liked to have everything under control in their classrooms--law and order was given top priority.

7. Teachers were more comfortable teaching groups of students rather than instructing a single student.

If this list of teacher-preferences represents dominant attitudes of teachers functioning in a teacher-based educational approach, it would appear that significant changes are required if a move to a resource-based educational approach is implemented.

The Principal

In 1984 the Ministry of Education in Ontario published a documented called Ontario Schools: Intermediate and Senior Division (OSIS). It was a major tool used in the restructuring of grades 7 to 12. This document had a complete section dealing with school libraries. It addressed the role of the principal in the overall scheme of things saying he/she "should ensure that the teachers and the teacher-librarian have the time to plan cooperatively so that activities and materials in the resource centre directly support program objectives" (Section 2:11). But this is by no means the only role of the principal.

The following excerpts were taken from the keynote address to the Annual Conference of the International Associ-

ation of School Librarianship given by Haycock (1984), Coordinator of Library Services with the Vancouver School Board on July 30 in Honolulu, Hawaii:

> As with the school district, the principal, as the professional responsible for the implementation of board policies and procedures, is accountable for the school program, and has a responsibility to see that all school resources, including the teacher-librarian and the library materials, are used as fully and effectively as possible.
>
> There are a large number of things that the principal can do to support and enhance the program, from querying prospective new teachers on how they would involve the teacher-librarian in their program, to attending orientation and inservice programs put on by the teacher-librarian for staff members, through to including questions about the ways in which the resource centre and teacher-librarian were used in instructional programs when evaluating teachers for written reports.
>
> The research on the principal is quite clear: the principal is the single most important factor in the development of a strong library program ... The principal is the key player in seeing that a program is developed, supported, and enhanced. The principal selects and evaluates the staff; the

> principal is accountable for the implementation of board policy; the principal can create the necessary environment to enable the teacher and teacher-librarian to work toward effective programs for resource-based learning. (pp. 91-92)

Brown (1988) agreed that in order for a school to change to the resource-based approach the leadership for change must come from the principal. "The role of the school principal will be critical, for it is the principal who will provide both pressure to adopt this approach and support and encouragement during the whole process" (p. 34).

Most experts agree that the principal is the prime agent of change. A key question that the principal must ask is: "How can I and should I bring this change about"?

The Process of Change

There are a number of cliches that seem to reflect the philosophy held by many educators with regards to the topic of change: What goes around, comes around; History always repeats itself; A change is as good as a rest; and The more things change, the more they remain the same. However, most do agree that change occurs slowly and cannot be rushed.

In reference to the educational system, Monkhouse (1986) maintained that change has been the responsibility of a variety of different groups, depending on the decade. He

found that the school administrators of the 1950s were thought to be the ones to take care of change. The classroom teacher was seen to have taken over the role during the 1960s and 1970s. It was not until the 1980s that the responsibility for change was placed where it should have been all along, on the shoulders of all who will be affected by the change. Working co-operatively is where the emphasis is now placed in currently accepted models for change.

Still, if a school is to make a successful change from the traditional teacher-based approach to the resource-based approach to education, the principal must play a major role as the officer or agent in the process of change. Monkhouse (1986) advised that it would be wise for change advocates to be aware of basic principles for winning over and influencing people. Such knowledge should make the process of change smoother and more effective.

Monkhouse (1986) gave this advice:

> ... adults, as a general rule of thumb are pragmatic in nature and frequently react negatively to work related pressures, if they cannot envision immediate, satisfactory success. In fact, the greatest motivator for adults to make change is the apparent ease of making the change. This fact then, can be held as an important principle in attempts to bring about change. Removal of all or most practical obstacles to change will expedite

the change by providing the motivation to do so. (p. 9)

Autonomy

To be independent and have mastery over their own lives is the desire of most western adults. Still, most people want to be part of a group as well. Therefore, when working through the process of change, it is desirable to provide a balance of activities. Those that call for individual involvement and those that require group work should be considered. Monkhouse (1986) noted that when something has to be learned, adults present (7 to 1) a self-designed and self-directed approach. This allows individuals to select the level of autonomy they wish to maintain. Monkhouse described seven additional human considerations for implementing change:

1. **Non-Threatening:** Change must be a gradual process and progress naturally. It must not be rushed or forced upon a person. If it is perceived as such then it will be looked upon as a threat. The person or group introducing the change must do so slowly and surely.

2. **Consider Age:** The age of the faculty must be taken into consideration. The program of change must permit the over-40 members of the faculty time to integrate the new with the old, safe, proven ways.

3. **Allow Time:** No one wants to be embarrassed. Therefore, when implementing change, allow time for it to be

digested by the older teachers. This may take less time than you think. However, it must not be forgotten that regardless of age, everyone will need time for change. The change itself must be voluntary in order to obtain a high rate of success.

4. **Take the Direct Approach:** When trying to justify the need for change, be direct. Most people prefer this approach. Be pragmatic, use games, analogies or diagrams, whatever it takes to make your point as clear and simple as possible.

5. **Ask Advice:** To insure that failure will be avoided, ask for advice from the members of the faculty who will be involved in the change, so that you will find out the most acceptable methods, activities and setting for change.

6. **Move Cautiously:** Make sure that you as the agent of change are not perceived as coming on too strong nor too weak by those you are addressing. You must be sure to read your faculty correctly so that when you introduce the topic of change you will not appear to threaten them.

7. **Collaborate:** In today's society it is unlikely that people will place complete trust in an expert, superior, or principal. If your faculty members regard you as something other than their equal then change will come hard, if at all. Therefore, it is wiser to collaborate with the faculty members involved. Those expected to change must be in on the planning and implementation of that change.

Monkhouse (1986) further delineated nine strategies that

principals and other change advocates should consider:

1. To increase your chances of success be sure to draw on the backgrounds of those involved in the implementation program. This way you will not run the risk of some faculty member getting the impression that you think your background superior and more relevant.

2. Change must never be perceived as specific, inflexible and ultimate. Instead it must be considered unbiased and receptive to differences in points of view. Two-way communication is necessary and it must be realized that sometimes it is more productive to get up, walk away and leave the topic for another time. The principal must be aware of unseen influences on the group such as report card time or personal obligations that cannot be helped or changed.

3. The principal must make sure that positive reinforcement is frequent and felt by each member of the group involved in the change. Being able to read the body language of the group involved would be an asset.

4. People are often suspicious and fearful of change, especially if the change is forced. Time must be made available so that the members can share their concerns and their fears can be calmed.

5. The implementation program of change must be geared for success. It must offer a variety of activities and occasions which will almost assure the individual and group success often and regularly in administering the expected

change.

6. Be aware that indicators such as odd, illogical and uncommon behaviour, which may surface in some staff members when informed about change, may be mistaken for childishness behaviour and may really be cries for help. If not attended these symptoms will result in failure to change.

7. The principal as the agent of change, must insure that the implementation program must exhibit and prove to those involved that change will make the job experiences more practical and better overall.

8. The principal must make the effort to get to know as much as possible about the people who are expected to make the changes. This will make the task that much easier.

Monkhouse makes a final suggestion that must also be considered:

> Finally, who is the best person to inaugurate and carry out the change process? Honesty with regard to your own personality quirks must be assessed. If you as change agent cannot subvert those characteristics which would tend to be distracting for others, a responsible move would be to step aside. Not everyone is capable of successfully dealing with colleagues, peers, or other adult groups all the time. A golden rule is to recognize and work within the limitations of one's own weaknesses, fears, and foibles. (p. 12)

There has been a large amount of research done on factors which are related to making improvements in schools. Examples of such work includes Leithwood and Montgomery (1982), Purkey and Smith (1983) and Brophy (1983). However, most of the research would be considered in general terms rather than specific. In fact, there has been little research done in the areas of how and why improvement occurs.

Fullan (1982), in The Meaning of Educational Change, made assumptions and guidelines about change that might be considered and reflected upon. He regarded these assumptions as basic ingredients if an approach to educational change is to be successful:

> The assumptions we make about change are powerful and frequently unconscious sources of actions. When we begin to understand what change is as people, experience it, we begin to see clearly that assumptions made by planners of change are extremely important determinants of whether the realities of implementation get confronted or ignored. The analysis of change carried out so far leads me to identify 10 "do" and "don't" assumptions as basic to a successful approach to educational change.
>
> 1. Do not assume that your version of what the change should be is the one that should or should not be implemented. On the contrary, assume that one of the main purposes of the process of imple-

mentation is to exchange your reality of what should be through interaction with implementers and others concerned. Stated another way, assume that successful implementation consists of some transformation or continual development of initial ideas.

2. Assume that any significant innovation, if it is to result in change, requires individual implementers to work out their own meaning. Significant change involves a certain amount of ambiguity, ambivalence, and uncertainty for the individual about the meaning of the change. Thus, effective implementation is a process of clarification.

3. Assume that conflict and disagreement are not only inevitable but fundamental to successful change. Since any group of people possess multiple realities, any collective change attempt will necessarily involve conflict.

4. Assume that people need pressure to change (even in directions which they desire), but will only be effective under conditions which allow them to react, to form their own positions, to interact with other implementers, to obtain technical assistance, etc. Unless people are going to be replaced with others who have different desired

characteristics, resocialization is at the heart of change.

5. Assume that effective change takes time. It is a process of "development in use." Unrealistic or undefined time-lines fail to recognize that implementation occurs developmentally. Expect significant change to take a minimum of two or three years.

6. Do not assume that the reason for lack of implementation is outright rejection of the values embodied in the change, or hard-core resistance to all change. Assume that there are a number of possible reasons: value rejection, inadequate resources to support implementation, insufficient time elapsed.

7. Do not expect all or even most people or groups to change. The complexity of change is such that it is totally impossible to bring about widespread reform in any large social system. Progress occurs when we take steps (eg., by following the assumption listed here) which <u>increase</u> the number of people affected. Our reach should exceed our grasp, but not by such a margin that we fall flat on our face. Instead of being discouraged by all that remains to be done, be encouraged by what has been accomplished by way of improvement resulting

from your actions.

8. Assume that you will need a plan which is based on the assumptions and which addresses the factors known to affect implementation. Knowledge of the change process is essential. Careful planning can bring about significant change on a fairly wide scale over a period of two or three years.

9. Assume that no amount of knowledge will ever make it totally clear what action should be taken. Action decisions are a combination of valid knowledge, political considerations, on-the-spot decisions, and intuition. Better knowl dge of the change process will improve the mix of resources on which we draw, but it will never and should never represent the sole basis for decisions.

10. Assume that change is a frustrating, discouraging business. If all or some of the above assumptions cannot be made (a distinct possibility in some situations for some changes), do not expect significant change as far as implementation is concerned. (pp. 83)

It would be safe to assume that the process of change is slow to come about. It is not immediate, nor will it occur over night. It takes years, if ever, for complete change to occur. Change cannot be forced or dictated if it is to be

successful. If a school plans to switch from a traditional program to a resource-based program, then it is extremely important for all concerned to be aware of the characteristics of the change process.

Summary

In response to the policy established by the Newfoundland and Labrador Department of Education in its Program of Studies (1988-90), which mandated a move to resource-based classroom management, a task force was established at Mary Queen of Peace School in St. John's, Newfoundland. The purpose of this task force was to place in motion a plan to design and implement a series of resource-based learning materials for integration into the school's curriculum.

Research was conducted to establish goals and strategies consistent with the needs of a program which shifted educational emphasis from a teacher-centered to a learner-centered program. A plan of action to implement this program was set in motion by the task force. Chapter III describes the design and development procedures used to produce these materials and examines in detail the unit designed for the grade nine program.

CHAPTER III

Design and Development of a Resource-Based Instructional Unit

Introduction

In 1988, the Government of Newfoundland and Labrador published a document entitled Program of Studies (1989-90) which mandated a policy whose implementation required important strategy and curricular changes in Newfoundland's schools. Relating to classroom instructional materials and school personnel, it stated:

> While a course text is the principle resource in the educational process there is a need for additional resources to enrich learning experiences, to accommodate various learning styles, and to encourage a variety of instructional approaches. These additional resources can best be provided through a properly functioning school library.
>
> The school library is a learning centre. It should be stocked with a variety of materials and equipment, professionally selected and managed, designed to meet the instructional needs of teachers and the learning needs of students. The teacher-librarian plays a key role in the planned and purposeful use of library resources in the teaching/learning process (resource-based teach-

> ing/learning). Teacher-librarians, teachers, and administrators work together in the development and delivery of instructional strategies which are designed to meet the individual needs of students. (pp. vi-vii)

During the 1987-88 school year, the faculty of Mary Queen of Peace School, St. John's, Newfoundland, undertook to develop a series of interrelated resource-based instructional materials for use within the school which would integrate a continuum of library skills and curriculum-specific topics for each grade level. This chapter describes the procedures and strategies used to design and develop these materials.

Preliminary Organization and Planning

As a consequence of attendance by faculty members at provincial conferences, faculty workshops, and discussions within faculty meetings, decisions were made to introduce into the curriculum a series of resource-based instructional materials which would be in accord with recommendations of the Newfoundland Department of Education's Program of Studies (1989-90).

The Mary Queen of Peace School has a population of 850 students enroled in grades K through nine. The faculty is made up of 40 members, three kindergarten teachers, three teachers for each grade ranging from one to nine, three teachers assigned to the handicapped unit, two special

education teachers, two music and band teachers, one teacher-librarian, a vice-principal, and the principal.

The faculty meets regularly to consider operational strategies and to discuss curricular matters. As a result of discussions related to integrating library skills with subject-matter skills, a school library committee was appointed by the school principal in the fall of 1986. The committee was comprised of selected volunteers and included: a teacher from primary, one teacher from elementary, one from junior high, a special education teacher, the teacher-librarian, and the principal.

By February 1987, the School Library Committee met once a month to discuss concerns related to the role of the librarian. The group investigated relevant literature and collected information to guide their decisions. Among the first documents which related directly to their deliberations was the Library Policy of the Roman Catholic School Board of St. John's (1987), which stated: "The primary objective of the school library resource centre is to implement, enrich and support the educational program of the school and encourage the recreational reading of students" (p. 8). It continues to say that one of the roles of the teacher-librarian is to "work closely with other staff members" and do everything possible to assist them with the library resource services of the school. These aims were echoed and amplified in other articles and provincial policies which were examined.

The committee gathered information from relevant articles in journals such as Emergency Librarian, a publication of the Canadian School Libraries Association, the Elementary School Journal, and The Morning Watch, a publication of the Faculty of Education at Memorial University of Newfoundland. They found that the overall role of the teacher-librarian and the library resource centres in the provinces of Ontario, Saskatchewan, Alberta, and British Columbia as described in the literature were very similar to those of the Province of Newfoundland and Labrador.

In September of 1987, the School Library Committee attended a conference sponsored by the Newfoundland Teachers' Association Educational Media Council. In the keynote address, Strengthening the Foundations for Teacher-Librarianship, Haycock (1987), Coordinator of Library Services with the Vancouver School Board, emphasized that the teacher-librarian should take on a more active role in the educational process, and that the library be used more as a centre for resources to augment the curriculum.

The experience of the Educational Media Council Conference provided a catalyst for the committee members in designing a plan of action for the school's library program. Agreeing that the role of the teacher is to help children learn how to learn, they redefined the title "librarian" to "teacher-librarian" and defined the role "... as one who cooperatively works with teachers to plan units of work

utilizing various resources. The emphasis of these units is on developing lifelong learning skills--not content" (A Report on the Progress of the School Library Committee, 1988, p. 2).

To facilitate a program which enables the teacher-librarian to work with teachers in a developing unit of study, the committee created a policy which established a flexible library schedule. The committee established schedule procedures which included a visit in November of 1987 by the teacher-librarian and a number of the school's primary teachers to Eugene Vaters School where resource-based teaching/learning was being practiced.

In the same month, the School Library Committee presented a one day workshop to the other faculty members. The main topics presented at that workshop were:

1. The role of the teacher-librarian and the Resource Centre.
2. Resource-based teaching/learning.
3. Learning centres.
4. Evaluation.

One of the decisions which came out of that workshop established a weekly meeting for all faculty members at their respective grade levels to develop an informational skills continuum booklet. The purpose of the booklet was: "To insure that the students are moving along a continuum towards becoming independent, life-long learners, and to ensure that some skills are not taught repeatedly to some students, while

not at all to others" (Mary Queen of Peace Information Skills Continuum, p. 1). (See Appendix A).

The major function of the Information Skills Continuum booklet was to provide guidelines for curriculum development. A prime goal of the committee was to have all teachers and students go through the process of experiencing within the curriculum a resource-based unit of study which would incorporate some skills identified in the skills continuum booklet. This goal was adopted by the entire faculty and a plan to have the informational skills continuum identified for each grade level before the end of that school year was set into motion. The following school year of 1988/89 was targeted for the development of resource-based units for use in each grade level of the school.

Operational Developmental Strategies and Procedures

The committee identified a need that had been variously expressed in the literature, in the Department of Education policy statements, in conferences and workshops, and in faculty meetings. That need called for implementation of resource-based units of study reflecting the goals of the curriculum. A specific area of concern involved the coordination and integration of library and information-gathering skills with the content of the general curriculum.

A prime source of resource-based units is derived from cooperative development of materials by classroom teachers,

working with the teacher-librarian, and utilizing local community resources. The committee initiated development of an Informational Skills Continuum booklet. Using this document, the faculty met one hour a week at each grade level during the period from January to April, 1988 to develop materials. The teachers in each grade level developed the materials in the booklet which were related to their grade level. This booklet was then edited by the School Library Committee and each faculty member received a copy in December, 1988. (See Appendix A).

With the completion of the booklet, the teachers at each grade level were assigned the problem of developing a resource-based learning unit for their specific grade level. This unit was to be based on the curriculum and the Informational Skills Continuum booklet and was to be presented within a scheduled two-week block of time during the 1988-89 school year. Because of the large numbers involved (average of 80 students per grade level) and because this was a first time learning experience for everyone involved--students, teachers, teacher-librarian, and principal alike--it was decided that the library and the teacher-librarian would be available on a reserved schedule which allowed two-week blocks of time for each grade level. This allowed for experimentation, alteration, and space in which to work. In January 1988, the fixed schedule of the library was changed to a flexible one in order to accommodate the new plan.

Nine committees were established to design a resource-based unit of study for each grade level from K through nine. The work of the committee of the ninth grade was typical of the process that all committees experienced for their unit. This paper concentrates on the work of the grade nine unit committee and is a case study report on their work in designing, producing, implementing, and evaluating their unit.

Grade Nine Resource-Based Learning Unit

This committee for the grade nine unit was composed of three grade nine teachers, the junior high remedial teacher, and the teacher-librarian. From January to May 1989 they met weekly with the teacher-librarian to plan that grade level's resource-based learning unit of study. Hereafter in this paper this group will be referred to as the planning team.

Basically, the planning team followed the procedure developed by the Vancouver School Board Library Services Cooperative Program Planning and Teaching Checklist. (See Appendix B). In a series of planning meetings, the three grade nine teachers, the teacher-librarian, and the junior high remedial teacher reviewed the grade nine program to identify an area of study which would be suitable for this resource-based unit.

A unit dealing with events leading up to the entry of Newfoundland into Confederation was identified as an appropriate subject. This topic was chosen for the following reasons:

1. It was addressed in the grade nine social studies program.

2. It could be integrated into the language arts program.

3. Four of the informational skills identified in the skills continuum could be taught in this unit.

Existing Materials

With the topic identified, the planning team surveyed the available materials on the subject. It was discovered that the print media had much to offer in this area. Numerous books and articles were found, both at the A.C. Hunter Library in the Arts and Culture Centre, St. John's, Newfoundland and the Memorial University of Newfoundland Library. Titles found included:

1. No Apology From Me by J.R. Smallwood.

2. Newfoundland Past and Present by L.E.F. English.

3. Newfoundland Island Into Province by St. John Chadwick.

4. The Book of Newfoundland, Vol. 3 by J.R. Smallwood.

All of these materials were either too difficult in reading level or required a more extensive background in the subject matter than the typical grade nine is expected to have attained. Because of this, coupled with the limited class time available for the unit (two week block), and the vast amount of print material which was available, it was concluded

that the topic itself was too broad for the time frame. Therefore, focus of the unit was narrowed to the historical period directly prior to the final vote at the National Convention which lead to Newfoundland joining Canada in 1949.

In order to utilize the limited amount of time available for this unit, a plan was implemented to find information that was presented in a capsulized form. Because of its ability to capsulize and condense a subject into its main parts, the electric media was researched to determine what was available.

Materials at the Provincial Archives, the Department of Education, the National Film Board of Canada, and the Canadian Broadcasting Corporation were investigated. The Provincial Archives offered a large amount of detailed print material which covered the day-to-day details of the National Convention, including such topics as reports from finance, education, agriculture committees, etc. These materials, catalogued under the topic The National Convention 1946-49 (Finding Aid #34) were extensive and detailed events in great depth far beyond the normal grade nine level. However, under the title The Still and Moving Images Collection (Finding Aid #34), a selection of old disks and reel-to-reel tape recordings, which captured most of the proceedings of the events of the National Convention, was located. However, the Head Archivist at the Provincial Archives explained that these tapes were not complete nor were they available to the public at that time.

The Department of Education and The National Film Board has in their collection a 16mm film, The Little Fellow from Gambo, a biography on Joseph R. Smallwood, which was not suitable because it does not deal directly with the topic. However, committee research found that the Canadian Broadcasting Corporation had over the years produced a small number of programs dealing directly with the activities of the National Convention in 1949.

The planning team acquired a copy of three such productions in VHS video format which were incorporated in the unit. They were entitled:

1. Video (1): Joey.
2. Video (2): As Loved Our Fathers.
3. Video (3): Confederation.

In the Curriculum Centre at Memorial University of Newfoundland, more information was found. One particular information folder (No. C38, Newfoundland and Confederation) was discovered to have excerpts from The Confederate and The Independent, two rival papers of the day, along with a political song and three political cartoons of the day. All were chosen to be a part of the resource-based unit of study. In that same folder a copy of an essay written during the time of the Confederation fight entitled The Tenth Province was also chosen as a source of information.

Mr. Tom Cahill, a well known local producer and author (As Loved Our Fathers), who also took an active part in the

political scene in Newfoundland at the time of the Confederation fight, agreed to serve as a resource person for the unit of study and to address the learners at the school and explain the positions taken by the pro- and anti-confederates. To complete the informational materials required for the resource-based unit of study, examples of well written and poorly written editorials from current local newspapers were provided.

The planning team now had accumulated all of the materials needed to proceed with the resource-based unit of study. The team had followed the policies put forth by the Provincial Department of Education and the school board regarding resource-based teaching and learning. They had attended workshops set up to inform the staff about resource-based units, they had met regularly to identify the skills that should be taught at the grade nine level, and they had researched the unit of study to be used. Characteristics of learners were next examined prior to putting into place the development and evaluation plans for the resource-based unit.

Learner Analysis

General Characteristics

The 78 learners for which this resource-based learning unit was developed consisted of three classes of grade nine boys and girls enrolled at Mary Queen of Peace School during

the school year 1988-89. The majority came from urban middle class backgrounds. More than 90% of the le. ıers had maintained passing grades in most of their subjects. However, there was a small group, 1%, that were having difficulty keeping up with the curriculum, and were receiving remedial help. The age of the learners ranged from 13 to 16 years. There were three learners repeating the grade.

Attitudes

Based on the planning team's knowledge of this group of learners, it was felt that their initial attitude would range from that of total disinterest to mild curiosity. It was not uncommon for this age group to show little or no enthusiasm or pleasure when a project was announced. A characteristic of this target group is that it is often considered unacceptable behaviour by their peers to show any outward positive signs towards school and its related activities.

Language

Most of the learners, over 80%, rated high in oral language skills. However, the reading levels varied from a low of 4.0 to a high of over 12.0 according to the Canadian Achievement Testing results. This varied reading ability was not considered a major problem because most of the print media selected for the unit was written at a level no nigher than 4.0.

Development Plan

The development team for the grade nine unit--made up of the three grade nine teachers, the special education teacher and the teacher-librarian--met on a regular basis for two hours per week during the first semester, 1987. During this time a development plan was adopted which was used to establish:

1. A unit theme.
2. Individual responsibilities for team members.
3. Collection procedures for materials.
4. Production procedures for materials.
5. An instruction delivery format.
6. A time-line for unit development and implementation.
7. An evaluation procedure.

Unit theme.

The unit theme was established in consultation with representatives from the grade eight team and the teacher-librarian to ensure that the unit would integrate logically into the overall school plan. The unit entitled The Confederation Fight provided the learners with experiences to improve their skills in:

1. **Social Studies** - through examination in relative depth of an important event in Newfoundland and Canadian history, that of Newfoundland's entry into Confederation in 1949.

2. **Library Research Skills** - through research, analyzing and taking notes from documents, newspapers, articles and essays relating to the historical events studied.

3. **Language Arts** - through writing essays and editorial commentary based upon research collected.

Individual responsibilities of team members.

The planning team assigned responsibilities for production and implementation to individual team members. Each classroom teacher was given the responsibility for designing the work stations which would be contained in the teacher's own classroom. Design responsibilities included:

1. Decisions relating to work station format.

2. Decisions relating to work station content.

3. Collection and collation of resources contained in work stations.

4. Design of instructional materials within work stations--instructions, organization of work materials, quizzes, assignments, etc.

5. Design of evaluation instruments.

Collection procedures for materials.

The planning team established a cooperative research effort for locating, procuring and reproducing pertinent material in which the teacher-librarian served as coordinator and resource-person for the group. Each member of the team

was primarily responsible for the contents of the work stations in his/her classroom, but the research effort was collective and cooperative.

Production procedures for materials.

The planning team utilized the school for facilities for reproduction of handouts, quizzes, instructions and relevant materials. The Special Education teacher in the team accepted prime responsibility for production of many of the special elements, including signs and special graphic displays which needed special treatment such as lamination, etc.

Instruction delivery format.

The Development Team established an overall format approach which utilized individual work stations. Each was designed to function as a self-contained unit, with instructions, assignments, and most relevant data included within the work station. Media formats within the different units included:

1. Newspapers.
2. Magazine articles.
3. Essays.
4. Video tapes.
5. Drawings, political cartoons.

Time-line.

The planning team established a time-line for the design, development, and implementation of the unit of study. the time-line called for:

1. Establish overall theme of unit--January, 1989.
2. Divide theme into appropriate work station topics--February, 1989.
3. Design individual work stations--March, 1989.
4. Collect relevant materials--April, 1989.
5. Deliver the unit of study to the target audience--May 6-13, 1989.
6. Evaluate learner work, provide learner feedback--May 6-13, 1989.
7. Evaluate effectiveness of each work station, report to faculty--May 20, 1989.

Evaluation format.

The planning team made decisions relating to evaluating the effectiveness of the unit as an instructional instrument and to evaluating individual and group achievement of the learners as a result of their participation in the unit. Responsibility for designing and implementing individual evaluation components was assigned to individual members of the team. Learners were required to perform a variety of tasks during the completion of the entire unit. These tasks included:

1. Quizzes written at work stations.

2. Written essay.

4. Written editorial commentary.

4. Participation in voting for or against Confederation.

In April, 1989 the planning team had completed the design and production of the instructional unit, had the material prepared and was ready to implement instruction to the members of the grade nine classes at Mary Queen of Peace School. During the period May 6-13, 1989 the unit was delivered to the students. Chapter IV describes the implementation of the instructional unit.

CHAPTER IV

Implementation of Instructional Unit

Presentation Format

Planning and development of procedures for the grade nine unit were completed by the planning team in February 1989, materials were evaluated by April, and work sheet information was organized in preparation for delivery of the unit to the grade nine students. The following tasks were completed to make the centres operational:

1. A copy of each of the three video tape productions was acquired.

2. Three video tape machines were made available for the six required days.

3. Copies of all the materials that would be needed at each centre were reproduced. These included newspapers, political cartoons and songs, essays, etc.

4. Learner work sheets on each centre were typed and presented in the Background/Task format.

5. Multiple copies of each learner work sheet for each of the six centres were made.

6. Large banners identifying each centre were made and installed.

7. Classroom and library layouts were altered to allow learners maximum access to the centres.

8. All materials placed at each centre were laminated

to provide durability ensuring they could be reused in future years.

9. Schedule arrangements were confirmed with the resource person establishing the time, date of presentation and basic content of materials to be presented and discussed.

10. Learners were assigned to groups to allow for the maximum utilization of space within the time allotted. This meant that a selection process sorted and assigned students to groups on the basis of those who worked best together and those students who should be separated from one another for best performance.

Instructional Method

When all preliminary tasks were completed, learners were informed about the upcoming unit of study.

Organization and Procedure

Learners were introduced to the topic to be studied and were told that the 10 day project would involve three stages:

1. The collecting information stage.
2. The organizing information stage.
3. The editorial writing stage.

Collecting information stage.

The collecting information stage required all learners to

complete assignments and activities and take notes at each station. Six stations where resource information was placed were set up in classrooms throughout the school. Each of the three grade nine classrooms contained one of the three videos incorporated into the unit. Two smaller stations, one containing an essay and one containing political cartoons and songs of the period being studied, were set up in the junior high remedial teacher's classroom. The sixth station containing copies of two rival newspapers of the day was located in the library. The library was also used for the presentation made by the guest resource person. A teacher was based at each station to assist the learners with the different assignments that each had to complete.

The learners were divided into sub-groups, with approximately 16 in each group. This was done so that each station would not be overcrowded and to allow the teacher assigned to each station to be more available and effective in helping the learners.

The learners rotated in their sub-groups from station to station for the first five school days. At each station each learner received assignment sheets with instructions on tasks to be completed at that station. Each was also instructed to record a bibliography of references to be used in completing the final assignment of the unit, which required the writing of an editorial commentary on the events or personalities historically involved in the unit.

On the sixth day of the process the guest resource person Mr. Tom Cahill, a well-known writer, director, and producer presented a two hour lecture and discussion. He also answered questions by the learners regarding the advantages and disadvantages of Newfoundland entering Confederation with Canada. The presentation by the resource person signalled the end of the collecting section of the unit.

Organizing information stage.

In the organizing information stage the learners received instruction on how to write an editorial. Examples of current good and bad editorials were presented to the learners. This took place on day seven.

Editorial writing stage.

The editorial writing stage began on day eight. The learners wrote their first draft on their editorials on that day. The ninth day was set aside for revision and editing.

On the tenth and final day of the resource-based unit, the learners submitted their editorials to their respective classroom teachers, and at this time the students held a mock vote on whether or not to enter into Confederation with Canada. The results of the vote were 56% in favour of joining Canada.

A Detailed Description of Learner Activities for Each Day

On the day before the unit began, the students were assigned to their respective groups. Each learner was given a two page handout which gave a general overview of the topic and the purpose of the unit study. The format of the handout was as follows:

1. Introduction and brief history of topic to be studied.
2. Statement of the purpose of the unit study.
3. Sources of information to use.
4. Organization and procedure to follow.
5. Location of each centre.
6. Timetable involved.
7. Learner requirements. (See Appendix C)

Days one to five.

All of the learners met in their home rooms until 9:00 each morning during days one through five. At 9:00 each person was sent to his/her assigned centre. Each centre was supervised by one of the five teachers on the planning team. Once learners were at their centres, the teacher determined that each learner in his/her group was in attendance and properly assigned to that centre. Each learner was given a handout which gave background information on that particular centre and described the task required. The learners were then free to start the assigned task.

As the learners went through the steps of the task, the teachers were available to move from learner to learner, observing and helping where needed. The teacher's primary role was not to teach but to help the learner. The learner was to find, not be told.

When the assigned tasks at each centre were completed and time for work at the centre expired, the learners passed their completed assignments to the teacher at that centre and returned to their home rooms (9:00 to 10:20). This signalled the end of the first day's resource-based unit of study for the learners. This process was repeated at each centre for the first five days with students rotating through each of the five centres. It should be noted here that at the end of each centre assignment, the learners submitted the required assignment for that centre to the teacher responsible for that centre. It was the responsibility of each teacher to correct the work completed, assign a mark, and have the work and mark returned to each learner before the next day's assignment began.

Day six.

By the sixth day of the unit all learners had completed the requirements of the six centres and were addressed by Mr. Tom Cahill, the resource person for the unit. Mr. Cahill was an active anti-confederate at the time of the Confederation fight. He worked to try and defeat those who supported union

with Canada. After Confederation, he went on to write extensively on the subject--including the successful play and television show As Loved Our Fathers. Mr. Cahill presented to the learners the arguments for and against Newfoundland joining Canada. At the end of his presentation, he basically summarized and focused for the learners on the material and information they had found in the various centres. This presentation was followed by a question and answer period on the topic. Students were encouraged to take notes during this session.

Day seven.

On day seven of the unit of study, instruction was given to the learners by the teacher-librarian on how to write an editorial. Examples of current newspaper editorials were used in these sessions. During the next three school days, each student in each of the three grade nine classes worked on his/her drafts of their editorial. Two periods were set aside for each class.

Day eight.

On day eight the learners wrote their first draft of their own editorials. It was expected that notes taken at the centres were used as reference material. These sessions were supervised by the Language Arts teachers for each class during the Language Arts time slots (one hour and 20 minutes per

day).

Day nine.

On day nine of the resource-based unit of study, the learners revised and edited the original draft of their editorials.

Day ten.

At the end of the Language Arts period on the last and final day of the unit, the learners submitted the final draft of their editorial to their home room teacher. As a final activity, voting booths were set up in the gym and each learner was able to cast a vote for or against Newfoundland joining Canada. This act completed the resource-based unit of study of Confederation with Canada.

Evaluation Procedure

Evaluation procedures received extensive discussion among the planning team. The different components of the program were assigned and the degrees of difficulty for each component were established by team consensus. The length of the project and the difficulty of the content were examined carefully before final determinations were made. Evaluation on this unit of study was done on a daily basis. The team considered it important that feedback be given to each learner as quickly

as possible so that he/she would have a clear indication of how he/she was doing.

Evaluation was codified by assigning a numerical score for each component of the unit. The number of points per unit varied according to the difficulty and time allotted to the unit. A total of 138 points were allocated to the total project. The breakdown of the evaluation by units in shown in Table 1.

The editorials and bibliographies written by each learner were evaluated and the scores were applied towards each learner's Language Arts grade. The remainder of the marks were recorded as part of each learner's History grade. Thus 12 total points were allotted for the Language Arts and 126 total points were allotted for the History section. However, because the resource session with Mr. Tom Cahill was so successful and the question and answer section was so lively, very few notes were actually taken at this centre. Therefore, the planning team decided not to evaluate the learners with a numerical score at this centre, eliminating the 10 points originally allotted to this activity. The final tally of points for this history unit was reduced to 116.

Table 1

Summary of Point Allocations for the Six Centres

Centre		Points Assigned
1.	Video Joey	20
2.	Video As Loved Our Fathers	14
3.	Video Confederation	25
4.	Essay 10th Province	22
5.	Political Song and Cartoons	6
6.	Newspapers (Confederate/Independent)	24
7.	Resource Person Notes	10
	Sub-Total (points)	121
Bibliography		
1.	Completeness	2
2.	Order	2
3.	Spelling	2
4.	Punctuation	2
5.	Capitalization	2
6.	Indentation	2
	Sub-total (points)	12
Other (teacher discretion)		5
Total Points		138

Data Collection Procedure

The recording of scores for each centre was the responsibility of the teacher assigned to that centre. When scores were compiled that teacher was responsible for passing a copy of those scores on to the student and home room teacher of that student. After the conclusion of the unit of study, it was the responsibility of each home room teacher to compile the scores for each of the students in his/her group and to calculate the total mark which each student received. An analysis and discussion of the results of the evaluation procedure is presented in the following chapter.

CHAPTER V

Analysis of Results

Upon the completion of this resource-based unit of study, a number of procedures were implemented to analyze the results.

1. Learners were asked to write an overall evaluation after their completion of the resource-based unit of study. Suggestions by students on how to improve the experience were solicited.

2. Teachers held discussions on the overall affectiveness of the resource-based unit. Problem areas were identified and suggestions to improve the experience were presented.

3. Scores derived from each learning centre were examined to determine the mean, median, standard deviation, and extreme deviations in terms of individual performance and group performance for individual components and the total unit.

The Heydinger Model of Evaluation

The evaluation model which was followed by the planning team when designing its resource-based unit of study is described here with a discussion concerning effects each of the model's characteristics had on the unit. In 1979, the

Improving Human Performance Quarterly published an article by Heydinger (1979) entitled Planning an Innovation: An Inventory of Decision Variables. In this article, Heydinger discussed the importance of program evaluation as a way of insuring accountability and improving the educational programs.

Purpose

Heydinger (1979) maintained that in today's society, rational decision-making, along with the use of evaluative information, are emphasized more and more in influencing decisions. Programs which can justify themselves through documentation of evaluative results have a better chance of success and renewal.

Evaluation research can be an effective tool to help in the process of decision-making. Whether evaluation is used for the purpose of improving a particular program (formative evaluation) or for measuring its quality (summative evaluation), evaluation results play an important role in the final decision-making choices. Effective evaluation research does not dissect a program and examine it in isolated sections, but rather it assesses the entire program as a whole, in its real-world context, and then its effectiveness is measured.

Heydinger (1979) proposed that if program planners and decision makers consider the complete range of options available to them when selecting an evaluation methodology,

they can maximize the benefits which build up from an evaluation. Heydinger stated:

> Awareness of the alternatives during planning will improve the likelihood that an evaluation will meet the needs of decision makers. An inventory of characteristics of evaluations is presented in Figure 1. From this diagram it may appear that each characteristic is a two-point scale with one alternative existing at the exclusion of the other. Actually, these alternatives exist on a continuous scale, and in most evaluations a balance is struck between the two extremes. (pp. 124-125)

The critical characteristics of an evaluation project are discussed in detail by Heydinger and the essential contrasting paired elements and their relationships are illustrated in Figure 1.

Heydinger (1979) made a series of recommendations and observations which were carefully considered by the planning team when planning and designing of the resource-based unit was being done. He professed that:

> 1. An evaluation should be planned at the same time as a program is being designed ...
>
> 2. An evaluation must be designed to collect the ideas and needs of all related constituencies ...
>
> 3. An evaluation depends on the extent of the human and financial resources available ...

PURPOSES

FORMATIVE ---------- SUMMATIVE
(To Improve the Program) (To Judge the Program)

SCOPE OF THE EVALUATION

SINGLE COMPONENT ---------- COMPREHENSIVE
(e.g. Cognitive Growth) (Across all Components of the Program)

TIME FRAME

MONETARY ---------- LONGITUDINAL
(One Day Interview) (Across Entire Academic Year)
RETROSPECTIVE ---------- PROSPECTIVE
(How it Happened) (Where it is Going)

REFÉRENCE POINTS

COMPARATIVE ---------- ABSOLUTE
(Student Growth in Old vs. Growth in the New) (Characteristics of an Ideal Student)

DESIGN AND IMPLEMENTATION

CONDUCTED INTERNALLY ---------- CONDUCTED BY EXTERNAL PARTY
(Within Department) (Outside Researchers)

METHODOLOGY

INSTRUMENTED ---------- OPEN-ENDED
(Quantified Information) (Qualitative Information)

FEEDBACK

ORAL ---------- WRITTEN
(Workshop Presentations) (Formal Reports)
ASSESSMENT ---------- PRESCRIPTIONS
(Summarize Evaluative Data) (Provide a Series of Recommendations)

Figure 1. Critical Characteristics of Evaluation Project (Heydinger, 1979)

4. An evaluation requires the time and the commitment of project participants ...

5. More attention should be given to disseminating the results of evaluation ... (pp. 131-132)

A discussion of Heydinger's categories as they related to this resource-based unit of study follows.

Formative vs. summative evaluation.

Heydinger (1979) differentiates between formative and summative evaluation, saying that summative evaluations were designed to gauge the effectiveness of an educational program against some earlier agreed upon criteria. Their results are often intended for those responsible for resource allocation decisions. Formative evaluations, however, are divergent from the summative evaluation in that they are designed to provide data on the development of a program in progress. This type of evaluation allows an administrator of a program to reinforce strengths and eliminate weaknesses of the program and contributes to program development. Heydinger stated that:

> A comprehensive evaluation would include both a formative and summative component and, in fact, the results of a summative evaluation may initiate a second round of formative evaluations. Although the differences between summative and formative evaluations may be vividly characterized, such distinctions fade because most evaluations have

characteristics of both. (p. 126)

The resource-based unit of study which is being reported upon here had a dual purpose: (a) to judge the resource-based approach to the teaching/learning process; and (b) to see if this approach would improve the educational program presently in existence. It was important that the unit produced results that generally met the criteria established by the planning team and that the unit accomplished its assigned proportion of the overall curriculum goals. Therefore, it was essential that summative data was collected and analyzed.

Since this was an experimental effort by the faculty development teams to produce resource-based materials, it was vital to future design projects that as much formative data as possible be collected and analyzed to provide guidance both for revision of this unit and for development of future units.

Component vs. comprehensive.

Heydinger (1979) further differentiated between component evaluation and comprehensive evaluation. In component evaluations, the decisions determining which individual factors will be assessed and which will not is critical to the planning of an evaluation. The focus of an effective evaluation can be on a single component of a program or it can examine many components of a program. A wide variety of aspects other than learner achievement can easily be added or subtracted. The evaluator can focus on aspects such as

participant satisfaction or cost-effectiveness, or combinations of components which are of interest. Single component evaluations, typically, are designed for the purpose of research, not programmatic decision-making, and are very narrowly defined in purpose.

Comprehensive evaluations appraise many components of a program at the same time. Student learning, satisfaction, retention of material, and faculty roles could very well be addressed as a result of comprehensive evaluations. Such an approach confirms that a program is observed in the context of its environment, making sure not to over look critical aspects of it.

The planning team responsible for this resource-based unit of study was primarily interested in ascertaining the overall effectiveness of the unit and its suitability for general inclusion in the curriculum. The evaluation thus emphasized a comprehensive approach. Additionally, evaluations on individual components were examined to determine if specific goals were being met and measures of student and teacher satisfaction and their overall reactions were monitored and evaluated.

Momentary vs. longitudinal time frames.

It must be decided by those responsible for planning an evaluation how a program should be monitored, whether a single observation or whether observations over time are more

appropriate. By tracking a program over a span of time, its evolution can be measured closely. Longitudinal evaluation can gauge and graph progress on a long term scale.

Momentary evaluation, however, can provide an almost immediate report on program development at critical points. This allows a person or team to conduct interviews with individuals, have discussions with groups, and/or review the documents that are available, thus providing the basis for program assessment and feedback which is much quicker than the longitudinal approach. This type of evaluation is also usually less expensive to conduct than longitudinal studies. The person or persons responsible for a program can concentrate totally on preparing for the evaluation of it a few weeks in advance of the targeted date and can then turn attention to other activities for the rest of the time.

The time frame approach taken by the planning team in their resource-based unit study included both momentary and longitudinal evaluation. The evaluation procedure was planned and designed months in advance of the actual date of starting the unit. The planning team assessed what values would be given to the different centres involved in the project and just what the final assignment and its worth would be. However, once the actual unit began, evaluations were made daily by the planning team for the duration of the resource-based unit. This allowed for immediate feedback so the planning team could assess the progress of the learners and

adjust times and schedules as necessary.

Retrospective vs. prospective evaluation.

"Where we've come from" is what a retrospective evaluation focuses on, tracing the appearance of important variables and tracking their change from one year to the next. Retrospective evaluation tries to explain through the use of hindsight, just why certain things happened.

A prospective evaluation, however, concentrates on the future of a project. Heydinger (1979) pointed out that prospective evaluation is not interested in the past, but rather in what is to come. Evaluators must try to predict trends and identify indicators. It is important that the questions they ask and the data collection instruments they use must zero in on the future, not the past.

It is interesting to note that this planning team originally initiated the resource-based unit described in this thesis to address the onset of the information explosion which is upon us. One of the planning team's goals was to give the learners practice in finding data and developing it on their own. However, along with this goal, the planning team looked back at the results of the unit to see how it could be improved for next year, when it will be repeated again for another group of learners.

Comparative vs. absolute evaluation.

Heydinger (1979) stated that:

> Evaluative measures may stand alone or may flow from comparison with other programs. Comparative measures enhance the power of evaluation results, for they provide a relative measure of difference. The traditional may be compared with the nontraditional; the self-paced with the nonself-paced ... Regardless of the situation, the reference points should be thoroughly discussed during the planning stages of the evaluation. This will clarify the focus of the research and insure that both users and designers of the evaluation have consistent expectations. (p. 128)

Here again the planning team used both comparative and absolute measures in the planning and design stage of the unit. Because both teachers and learners had no experience with the resource-based approach to learning and teaching, it was very difficult to set up evaluative measures. However, the planning team did review the results of traditional projects which had been completed in the past by similar sets of learners who were involved with the unit of study which was used to develop these learning materials. These results were used as reference points during the planning and designing stage of the project and expectations were based on these results.

Past experience with a traditional approach to the unit of study was used to establish the performance standards and expectations which were used. There were no comparable scores or performance measures with which to make direct comparisons with this study's results, so the results reported here are essentially absolute in nature.

Internal vs. external evaluation.

Just who should conduct an evaluation, be it from within or outside the project, is a very critical decision in planning any evaluation. An external evaluation has more credibility over an internal one. However, expense and rapport with the personnel of the project must be considered.

Heydinger (1979) suggested that three questions be asked:

1. Is it obvious that the evaluation agent should be either involved or uninvolved in the project?

2. Is it important that the evaluator have expertise in the content area of the program being evaluated?

3. Is the group of evaluators experienced in conducting the type of evaluations which the program administrators would like to have?

The planning team decided that it was both unnecessary and impractical to seek an outside evaluator for the project. A goal of the exercise was to have the learners and the teachers go through the process as a learning experience.

Using the developers of the learning materials as

evaluators permitted ongoing evaluation and appraisal at every step of the way from initial planning sessions and research decisions to the final analysis of test scores and learner and teacher reactions. This provided a longitudinal evaluation experience which was beneficial to everyone involved.

Instrumented vs. open-ended evaluation.

The ease of collecting and the cost of the evaluation are important considerations for any planning team. There are a variety of evaluation methods available for collecting information on a project. Survey forms requiring quantitative or close-ended feedback by the respondents can be used. Such a form usually looks in depth at a single component of a program. Interviews, on the other hand, usually provide qualitative information. If the interview questions are open-ended, the respondents get an opportunity to appraise complex relationships. If not much is known about the program that is being studied, exploratory interviews are often best. A single hypothesis to be tested requires a more precise quantitative measure.

The methodology adopted by the planning team included quantitative testing on each of the units in order to determine the effectiveness of the methodology as compared to the more traditional teaching methods. Learners were asked to respond to exercises and written assignments in formats which provided specific information that could be scored and

compared quantitatively. However, ongoing verbal discussion and feedback allowed instructors to make changes and corrections as the units progressed. As part of an open-ended component of evaluation, teachers and learners were asked at the conclusion of the unit to give written reactions and opinions concerning any relevant aspect of the unit.

Assessment vs. prescription evaluation.

Assessment of quantitative data is relatively straight forward. Measures can be taken, quantified, and compared within groups or between groups. This assessment requires a neutrality of the evaluator and an objective discussion of the data. Results are usually compiled after completion of the unit and can be used to predict future success or failure of procedures or learners.

Prescription generally interprets feedback on an ongoing basis, making recommendations based on interpretation of the data as it is flowing in. Alternative courses of action may be recommended, resulting in major or minor changes in procedures as the unit is administered.

Prescription feedback was mainly used by the planning team on this project. The data received was interpreted by its members and recommendations for course changes were made as the occasion required.

Oral vs. written evaluation.

Heydinger (1979) stressed that the results of evaluation studies are too often written into lengthy reports which never fully get read by those who should read them. Feedback can be provided in a variety of ways:

1. Abstracts or executive summaries of long reports focusing on the crucial points.

2. Audio or video tapes may be produced to profile highlights.

3. Workshops can be given.

4. Oral feedback backed up by brief writeups.

Being aware of the learning styles of the group would greatly influence the type of feedback to use. In the case of the planning team, although formal written feedback was the major component, oral feedback was also used to gauge the responses of those directly involved in the unit.

Data Results

Formal evaluation of the academic performance of the learners as they progressed through the unit was recorded through a series of written quizzes and written assignments which were evaluated and scored by the individual instructors at their respective centres. The unit was completed by 78 learners over a 10 day period and the data recorded here were collected from these learners.

1. **Video Joey Centre.** At this centre the learners viewed a video tape of the play Joey and took notes as they viewed it. When the video had ended, each learner was expected to identify the key people and the arguments for and against Confederation in Newfoundland in 1949. This was done through a series of 19 short answer questions.

The lowest score recorded at this centre was 60% while the highest score was 100%. The average score for this centre was 83%. The standard deviation was 10.08.

2. **Video As Loved Our Fathers Centre.** At this centre learners were shown a video of the play As Loved Our Fathers highlighting the conflicts in a Newfoundland family which was brought about as a result of the battle for Confederation. Also emphasized are reasons some people voted for Confederation, while others voted for Responsible Government. The learners were asked to answer four essay questions at this centre.

The lowest score recorded at this centre was 50% while the highest score was 100%. The average score for this centre was 79%. The standard deviation was 12.57.

3. **Video Confederation Centre.** At this centre the video Confederation was presented. It was divided into two parts: Part 1 dealt with background leading up to the campaign for and against Confederation, while Part 2 looked at the campaign and results of the vote. Learners were required to answer five short answer questions and three essay ques-

tions.

The lowest score recorded at this centre was 60% while the highest score was 100%. The average score for this centre was 86%. The standard deviation was 9.41.

4. **Newspapers (Independent and Confederate) Centre.** At this centre the learners were presented with copies of pages of two newspapers with opposite points of view at the time of the Confederation fight. The purpose of the exercise was to look for bias in the articles written. The learners were required to answer three essay questions dealing with bias in the articles presented to them.

The lowest score recorded at this centre was 67% while the highest score was 100%. The average score for this centre was 85%. The standard deviation was 10.23.

5. **Essay Tenth Province Centre.** At this centre the learners were presented with a copy of an article written at the time of the Confederation fight. The learners were required to read the article and answer a series of fill-in, short answer, and essay questions dealing with the information presented in the article.

The lowest score recorded at this centre was 70% while the highest score was 100%. The average score for this centre was 95%. The standard deviation was 6.37.

6. **Political Song and Cartoons Centre.** At this centre the learners were presented with a political song and three political cartoons of the day. The learners were required to

answer two short answer questions for each topic.

The lowest score recorded at this centre was 33% while the highest score was 100%. The average score for this centre was 94%. The standard deviation was 13.83.

Table 2 gives a breakdown of the mean, highest and lowest scores, and the standard deviation at each of the six learning centres.

Table 2

The Mean, High, Low, and Standard Deviation of the Six Centres

Centre	Mean	High	Low	Standard Deviation
1	83%	100%	60%	10.08
2	79%	100%	50%	12.57
3	86%	100%	60%	9.41
4	85%	100%	67%	10.23
5	95%	100%	70%	6.37
6	94%	100%	33%	13.83

The highest scores were recorded at centres five and six. these centres were also appraised to be the least difficult by the planning team. The average scores of these centres were 95% (learner centre number five) and 94% (learner centre number 6). A closer look at these scores show that 85% of the

learners received between 90 and 100% at centre five (Essay Tenth Province Centre) and 77% of the learners received between 90 and 100% at centre six (Political Song and Cartoons Centre).

The three video centres produced the lowest average scores. It was agreed by the planning team that this could be a result of the fact that the learners found it difficult to take notes and watch a production simultaneously. Learners were not allowed to stop the tape during the show. (See Table 3).

Table 3

Summary of Learner Results From the Six Learner Centres

		Centres					
Letter	Mark	1	2	3	4	5	6
F	(0-49%)	-	-	-	-	-	1
D	(50-59%)	-	8	-	-	-	2
C	(60-69%)	6	11	6	8	-	5
B	(70-79%)	27	29	18	20	4	2
B+	(80-89%)	31	20	40	22	8	6
A	(90-100%)	14	10	14	28	66	62
Total Learners		78	78	78	78	78	78

The Video As Loved Our Fathers Centre resulted in the lowest scores and averages (79%). The planning team reasoned that this video was the most difficult of the three because it was presented in a dramatic play format which did not always present information in straight black and white terms. Therefore many of the learners had trouble finding the answers to questions asked of them. However, even with this fact taken into account, the actual scores exceeded the expected scores estimated by the planning team.

Table 2 shows standard deviation scores for each of the six units, ranging from a low of 6.37 on unit five to a high of 13.83 on unit six. Unit two, which recorded the lowest mean also recorded the second highest standard deviation score (12.57), indicating that not only was it the most difficult for the learners, but that there was more variation in their abilities to master the unit.

A standard deviation score is an indicator of how homogenous the performance of individual learners are to the average performance of the group. A low standard deviation score on a unit of study provides an indication that most of the learners are performing at similar levels of achievement. Most instructional designers strive to create units in which most of the material is mastered by most of the learners. Evidence of success in creating such materials is indicated by data which indicated high means and low standard deviations. The mean score for this unit (87%) exceeded the expectations

of the planning team and the standard deviation (10.41) was well within the expectations of the planning team when the wide range of students' abilities within the total group was considered.

Table 4

Summary of Learner Results in Percentage Form of Learner Centres

		Centres (Percentage)					
Letter	Score	1	2	3	4	5	6
F	(0-49%)	-	-	-	-	-	1
D	(50-59%)	-	10	-	-	-	3
C	(60-69%)	8	14	9	10	-	6
B	(70-79%)	35	37	23	26	5	3
B+	(80-89%)	40	26	51	28	10	8
A	(90-100%)	18	13	18	36	85	79
Total Percent		100	100	100	100	100	100

Table 5

Average Score Received at Each Learner Centre

Centre	Average Score
1. Video Joey Centre	81%
2. Video As Loved Our Fathers Centre	79%
3. Video Confederation Centre	86%
4. Newspapers (Independent/Confederate Centre	85%
5. Essay Tenth Province Centre	95%
6. Political Song and Cartoons Centre	94%

Learner Reaction

At the end of the project, all the learners were asked to write down their reactions and opinions of the Confederation Fight unit which they had just completed. From the comments recorded, 98% of those that took part reacted highly favourable to the experience. The remaining 2%'s reaction ranged from indifference to pure dislike.

It must be remembered that the results reported here were for the grade nine learners in the school. However, this was just one part of a school-wide experiment in resource-based teaching. It is interesting to note that all grade levels from K through nine went through a very similar process of

learning by students and teachers and all other grades experienced similar positive results as the grade nine level.

Teacher Reaction

The teachers involved in the resource-based unit expressed a common belief that the entire exercise was a positive learning experience for all concerned. Each teacher had an opportunity to participate in team planning and teaching. Valuable experience was gained by them in how to guide an individual learner through a resource-based unit. Time management and group co-ordination skills were also developed and sharpened as a result of the experience.

The analysis of the results indicated that the entire resource-based unit of study was a valuable learning experience for both the learners and the teachers concerned. Besides learning as a result of their own efforts about the colourful history of Newfoundland's entry into Confederation, the learners developed and exercised useful tools on how to access information from a variety of sources. The teachers too, learned valuable skills in the areas of researching, planning, teaching, and evaluating a resource-based teaching and learning unit of study.

CHAPTER VI

Summary, Conclusions and Recommendations

Summary

While preparing for this unit of study the planning team identified four information skills from the grade nine section of the Mary Queen of Peace Information Skills Continuum which it hoped would be practised, reinforced, learned, and eventually used as tools by the learners as a result of this unit of study. The skills involved were:

1. Effectively organizing information from print, non-print and oral sources through the use of appropriate techniques of note-taking such as outlining and summarizing.

2. Identifying and judging the purposes and themes found in print, non-print and oral sources. (Bias emphasized at this level).

3. Locating and using information, recognizing the differences in primary and secondary sources.

4. Developing skills in keeping records of resources used and recording them in correct bibliographic format. (See Appendix A).

The planning team concluded that all of the objectives of the unit were met or exceeded. The overall objective of providing the learners with practice in looking for, finding, and using information individually and independently was achieved. From the teachers' point of view, the principal

objective was to work through the process of planning, implementing, and evaluating a resource-based use of study for the purpose of practice, experience, and the development of team strategies useful in designing instruction. This too, was judged successful by the participants. All members of the planning team learned a great deal from the entire experience. Mistakes and discoveries were made by both teachers and learners throughout the project. However, much learning took place by both groups.

The learners experienced independence as they discovered on their own the information skills needed to be successful in the future. In the written evaluation that each learner completed, the majority (98%) expressed that they enjoyed the entire experience and looked forward to their next resource-based unit of study. They stated that they preferred this type of learning over the traditional approach to which they are accustomed. The learners remarked that they felt they had more control of the learning experience and that it was more satisfying in finding information rather than being told it by the teacher. The major criticism of the entire unit experience concerned the lack of time which was allowed. The majority of learners felt that not enough time was provided each day for the unit. The teachers also agreed with the learners that more time should have been allotted for each of the sessions.

On the final day of the unit of study, a mock vote was

held by the learners. They were asked to vote on whether Newfoundland should join with Canada or remain an independent state free to choose if, when and with which country, if any, it wanted to join. The results of the balloting showed that 51% of the learners voted to join Canada.

The teachers too, learned much about planning, designing, implementing and evaluating resource-based instructional units. The participation in team teaching was experienced by all planning team members. All members also felt that the teaching staff had been drawn closer together as a result of the experience. It was agreed by the participating teachers that resource-based teaching and learning was a real alternative to the traditional approach to education and very appropriate for the challenges of living in and dealing with the information age which is upon us.

Conclusions

It was concluded by the planning team that the Confederation Fight resource-based unit of study was a useful and worthwhile undertaking. It allowed a group of teachers to experience for the first time the steps involved in the process of preparing, implementing, and evaluating a resource-based unit of study. Although much had been written on the subject, actually working through the process proved to be a most constructive form of learning and motivation. It pointed

out to the teachers involved in the project the important role that a resource-based approach to education can and must play.

The experience of producing and implementing this unit demonstrated that a lot of time, energy, and hard work must go into a resource-based unit of study by a planning team in order for it to work. A benefit of producing such a project is that once the work has been completed, it is then in place for future teachers and learners to experience. All that is necessary is to put the package in place and administer it since the background work has already been completed. Resource-based teaching and learning proved to be a benefit to all concerned. Everyone involved in the process grew in one way or another from the experience.

Recommendations

The implementation of this recourse-based unit of study was in fact a first time learning experience for everyone involved in the project. A number of recommendations arose from this introduction to resource-based education. Nine major recommendations are listed here.

1. **Identify objectives first.** In order to save time and frustration, it is important to identify the objectives of the group first, before looking for topics to use in resource-based units. Once the objectives have been identified, the topic should be set.

2. **Start off small.** One mistake this planning team made was to identify a topic that was too big in scope. It took time to realize that with a smaller topic the focus can be sharper.

3. **Have a topic that fits the curriculum.** Once a topic has been chosen, it must then be adapted to fit into the curriculum. If this process involves excessive changes and alterations, then it might be wiser to look for a more adaptable topic.

4. **Engage a resource person.** In order to bring a topic into focus for the learners, a resource person should be used. If such a person cannot be found for a topic then another topic should possibly be chosen.

5. **Allow ample time for implementation.** On the very first day of the unit of study, it was discovered that more time was needed in order to complete the task assigned at a particular centre. The time table was revised on the spot to accommodate this wrong estimate. If there had been no room for correction the result would have been congestion and a backlog of students at each centre. It is important that time be allotted which can be used to solve unexpected problems.

6. **Use a multi-media approach.** The planning team found that one of the reasons the learners responded so positively to the resource-based unit was because the information was presented in a variety of ways (print, video, overhead projector, resource person).

7. **Allow time for stop and start.** When using information that is presented to learners in such forms as video tapes, or slide tapes, it is necessary to set things up in such a way so that the learners can stop and start the production in order to take notes without missing some information.

8. **Check the teacher manuals.** Many teacher manuals make suggestions on how to link a certain topic with other subject areas. It would probably be profitable to allot time to reviewing these manuals for the purpose of finding a topic which could cover more than one subject area.

9 **Try out on a sample group first.** Once your planning team has completed gathering its information and organizing the material, make sure that the unit is first presented to a small sample group. This allows for kinks to be ironed out before the main group of learners are presented with the resource-based unit.

It has been rare in typical formal school situations for so many people of different abilities and interests to be part of such a positive experience. The whole process was, on balance, a very satisfying experience for everyone involved, teachers and students alike. At the beginning of this study, the author had mixed feelings about the introduction of such a new and completely different way of teaching in the form of resource-based teaching. The thought of making such a major

change in approach to teaching was both fearful and threatening. However, after completing the process and seeing it to its successful conclusion, it would be the recommendation of the author that today's education system should make serious efforts to change to a resource-based approach so students can be better prepared for the changes in the world that are going on around us here and now.

Bibliography

American Association of School Librarians and the Department of Audiovisual Instruction of the National Educational Association. (1969). Standards for school media programs. Chicago: American Library Association, pp. xi-xii.

American Association of School Librarians and the Association for Educational Communications and Technology. (1975). Media programs: District and school. Chicago: American Library Association, p. 107.

Beswick, N. (1977). Resource-based learning. London: Heinemann Educational Books, p. ix.

Brown, I.M.J. (1985). A study of the evolution of school library media programs and the process of educational change with implications for program implementation. St. John's, NF: Memorial University of Newfoundland, p. 12.

Brown, J. (1986-87). Teaching and resources: More than talk and chalk (2 parts). The Morning Watch, 14(1,2,3,4). Fall, pp. 7-14; Winter, pp. 2-13.

Brown, J. (1988, Fall). School libraries - past, present and future: The Newfoundland context. School Libraries in Canada, 9(1), 31-36.

Brophy, J. (1983). Classroom organization and management. Elementary School Journal, 83, 265-285.

Bruner, J.S. (1983). The process of education. New York: Vintage.

Canadian School Library Association. (1988). Guidelines for effective school library programs. School Libraries in Canada, 8(4), 30.

Committee on Post-War Planning of the American Library Association. (1945). School libraries for today and tomorrow. Chicago: American Library Association, pp. 1-12.

Crocker, R.K. (1983). The use of classroom time: A descriptive analysis. St. John's, NF: Memorial University of Newfoundland.

Curtain, C.C. (1945). Elementary school library standards. The Joint Committee of the National Education Association and the American Library Association. Chicago: American Library Association.

Davis, A.P. (1980). Individualizing instruction in the social studies through learning centres and contracts (how to do it series, 2(11). Washington, DC: National Council for the Social Studies. (ERIC Document Reproductive Service No. ED 195 472)

Davis, H.S. (1971). Instructional media centre: Bold new venture. Bloomington: Indiana University Press.

Davis, R.A. (1974). The school library media center: A force for educational excellence. New York: R.R. Bowker Company.

Denemark, G. (1961). Human variability and learning: Implications for education. In W. Waetjen (Ed.), Human variability. Washington, DC: Association for Supervision and Curriculum Development.

Educational Media Association of Canada. (1969). Media Canada: Guidelines for educators.

Fargo, L.F. (1913). Training high school students in the use of the library. In Address and proceedings, 51. Ann Arbor: National Education Association, p. 760.

Fullan, M. (1982). The meaning of educational change. New York: Teachers College Press.

Gagne, R.M. (1965). The conditions of learning. New York: Holt, Rinehart and Winston.

Goodlad. (1984). A place called school. New York: McGraw-Hill.

Hall, M.E. (1925). The development of the modern school library. In M. Wilson (Ed.), Selected articles on school library experience. New York: H.W. Wilson, p. 72, 75.

Hambleton, A. (1986, Winter). Education for school librarianship in Canada. School Libraries in Canada.

Haycock, C.A. (1985). Information skills in the curriculum: Developing a school-based curriculum. Emergency Librarian, 13(1), 11-17.

Haycock, K. (1981). The role of the school librarian as a professional teacher: A position paper. Emergency Librarian, 8(5), 4-11.

Haycock, K. (1984, July). Strengthening the foundations for teacher-librarianship. The Keynote Address to the Annual Conference of the International Association of School Librarianship, pp. 91-92.

Heydinger, R.B. (1979). Planning an innovation: An inventory of decision variables. Improving Human Performance Quarterly, 8(2), 123-133.

Jackson, R.W. (1968). Life in classroom. New York: Holt, Rinehart and Winston.

Jarolimek, J. (Ed.). (1967). Social studies education: The elementary school. Washington: National Council for the Social Studies.

Klausmeir, H.J. (1962). Learning and human abilities. Educational Psychology. New York: Harper.

Leithwood, K., & Montgomery, D. (1982). The role of the elementary school principal in program improvement. Review of Educational Research, 32, 309-339.

Library policy for the Roman Catholic School of St. John's. (1987). St. John's, NF, p. 8.

Mary Queen of Peace information skills continuum. (1988). St. John's, NF, p. 1.

Monkhouse, T. (1986, May). Human characteristics that facilitate change. The Canadian School Executive, pp. 9-12.

Ontario Ministry of Education. (1984). Ontario schools: Intermediate and senior division (Grades 7-12/OACS, Program and Diploma Requirements, 1984). Toronto: Ontario Ministry of Education.

Program of studies. (1988-89). St. John's, NF: Government of Newfoundland and Labrador.

Program of studies. (1989-90). St. John's, NF: Government of Newfoundland and Labrador.

Purkey, S., & Smith, M. (1983). Effective schools: A review. Elementary School Journal, 83, 427-452.

Sarason, S. (1982). The culture of the school and the program of change (2nd edition). Boston: Allyn and Bacon.

Sheffler, I. (1965). Philosophical models of teaching. New York: Harvard Educational Review, pp. 131-143.

Standards of library service for Canadian schools. (1967). p. 5.

Taba, H., Durkin, M.C., Fraenkel, J.R., & McNaughton, A.H. (1971). A teacher's handbook to elementary social studies: An inductive approach (2nd edition). Reading, Mass.: Addison-Wesley Publishing Company.

Taylor, L.C. (1972). Resources for learning. Great Britain: Hazell, Watson and Viney Ltd., p. 233.

Thompson, V. (1984). Information technology in education and training: The CET view. Programmed Learning and Educational Technology, 21(3).

Tickton, S.G. (Ed.). (1971). To improve learning: An evaluation of instructional technology, I, II. New York: R.R. Bowker Company, p. 17.

Toffler, A. (1970). Future shock. New York: Random House.

Travers, J.F. (1970). Fundamentals of educational psychology. Pennsylvania: International Textbook Company, pp. 183-201.

Wallen, N., & Travers, M.W. (1963). Analysis and investigation of teaching methods. In N.L. Gage (Ed.), Handbook of research on teaching. Chicago: Rand McNally and Company.

APPENDIX A

Mary Queen of Peace

Information Skills Continuum

Attached is the Information Skills Continuum for Kindergarten - Grade 9.

Information skills are skills which teach children how to learn. Teaching children how to become life-long learners involve teaching how to:

i) location information
ii) acquire and analyze information
iii) organize and record information
iv) present information

In teaching information skills it is necessary, and indeed essential, that these skills be taught in meaningful content and at increasing levels of difficulty so as the growth in skills becomes cumulative as the student advances to each grade level.

To insure that the students are moving along a continuum towards becoming independent, life-long learners, and to ensure that some skills are not taught repeatedly to some students, while not at all to others, it is necessary that the information skills be integrated into daily classroom instruction in addition to the Co-operatively Planned Resource-Based Unit.

INFORMATION SKILLS

Kindergarten

The Student:

1. Recognizes favourite titles, authors, illustrators and characters.

2. Knows the parts of a book's cover--title, author, illustrator.

3. Recalls information based on print or non-print materials (gives information orally).

4. Recognizes sequence in stories by putting 3-5 pictures in order.

5. Conveys information orally, using complete sentences. Gives one clear fact orally.

6. Uses filmstrips to locate specific information.

7. Uses pictures to gain information and to present information. Information is presented either orally or through drawing pictures, or other art medium.

Grade One

The Student:

1. Recalls information based on print and non-print materials. (Gives information orally and through limited used of print--ie. fill ins).

2. Alphabetizes to the first letter and finds words in a picture dictionary.

3. Recognizes main idea and sequence in stories.

4. Picks out the key words in a question (teacher-directed and small group oriented).

5. Uses the table of contents as a guide to the contents of a book.

6. Conveys information orally, using complete sentences. Gives two to three facts clearly.

7. Uses pictures to gain information and to present information. (Done at slightly more advanced level than Kindergarten, gaining more information).

Grade Two

The Student:

1. Recalls information based on print or non-print materials. (Present through "sentence completion").
2. Alphabetizes to the second letter and locates words in a picture dictionary.
3. Is aware of the newspaper as a source of information. (Use for weather reports).
4. Picks out the key words in a question independently.
5. Uses the table of contents and glossary as guides to the contents of a book.
6. Uses magazines for recreational reading.
7. Recognizes main idea, sequence and characters in stories.
8. Conveys information orally, with confidence, using complete sentences.
9. Conveys information in written sentences--basic short sentences (with correct punctuation).

Grade Three

The Student:

1. Recalls information based on print or non-print materials. Can answer thought-provoking questions, given opinions and make inferences in written sentence form.
2. Alphabetizes to the third letter and locates words in a picture dictionary.
3. Is aware of the newspaper as a source of information. Uses headlines and advertisements.

4. Knows how to use the dictionary.

5. Uses magazines for information purposes.

6. Conveys information orally, with confidence, using complete sentences. (Use eye contact, poise and clear speech).

7. Recognizes main idea, sequence, characters, mood and setting in stories.

8. Takes notes using key words and phrases.

9. Conveys information in written sentences. (Uses longer, more descriptive sentences).

Grade Four

The Student:

1. Uses guide words as aids in locating specific words.

2. Can state a purpose for reading, viewing and listening for information.

3. Takes point form notes on a given sub-topic.

4. Uses point form notes to write a paragraph in his/her own words.

5. Uses dictionary aids such as pronunciation, symbols, syllabication and accent marks.

6. Writes a simple bibliography using a form provided by the teacher.

7. Presents an oral report using written paragraphs.

8. Develops a "web" outline to organize information.

9. Interprets information presented in graph/chart/diagram form.

10. Presents information in graph/chart/diagram form.

11. Uses basic interview techniques for gathering information from resource people.

12. Participates in group discussions for various purposes, ie. sharing information, ideas, opinions and/or reaching consensus.

13. Demonstrates enjoyment in listening, viewing and reading as recreational activities.

Grade Five

The Student:

1. Uses a junior thesaurus as a source of synonyms.

2. Paraphrases information.

3. Knows where the information file is located.

4. Writes a simple bibliography, using guide sheets--for books, magazines, filmstrips, etc.

5. Presents an oral report using paragraph as guide.

6. Develops a web outline and chart to organize information. Interprets information presented in graph/chart/diagram form. Presents information in graph/chart/diagram form.

7. Uses basic interview techniques for gathering information from resource people.

8. Participates, following a set of guidelines, in group discussion.

Grade Six

The Student:

1. Uses context clues in selecting the appropriate meaning of new words.

2. Uses an atlas for information purposes.

3. Takes point form notes on a given subtopic.

4. Uses point form notes to write a paragraph in his/her own words.

5. Uses dictionary aids such as pronunciation, symbols, syllabication and accent marks.

6. Writes a simple bibliography (ie. lists sources of information).

7. Presents an oral report using paragraph as a guide.

8. Develops a report outline to organize information.

9. Interprets information presented in graph/chart/diagram form.

10. Presents information in graph/chart/diagram form.

11. Uses an outline to write a short report using his/her own words.

Grade Seven

The Student:

1. Organizes effectively, information from print, non-print and oral sources through the use of appropriate techniques of note-making, such as: Grade seven will introduce outlining and summarizing.

2. Identify and judge the purpose and theme in print, non-print and oral sources. Bias will be introduced.

3. Locates materials and information using the cord catalogue.

4. Students are introduced to recognizing the differences between primary and secondary sources, and will locate and use information obtained from both.

5. Students are introduced to sharing information through discussion.

6. Refine the skills of reading maps, atlases, charts, graphs, diagrams, photographs and statistics to locate and report information.

7. Utilizes the resources that are available outside the school such as: pubic libraries, community resource people, government agencies and field studies.

Grade Eight

The Student:

1. Organizes effectively, information from print, non-print and oral sources through the use of appropriate techniques of note-taking such as: outlining and summarizing. Paraphrasing will be introduced at this level.

2. Develop the skill of identifying and judging the purpose and theme in print, non-print and oral sources. Bias will be developed at this level also.

3. Locates and uses information from, and recognizes the difference in primary and secondary sources.

4. Introduces to students the skill of recording resources used in correct bibliographic format.

5. Acknowledges direct quotes from sources of information using the correct footnoting format.

6. Shares information or ideas through discussion focusing on reaction to and respect for others' opinions.

7. Reads maps, atlases, charts, graphs, diagrams, photographs and statistics to locate and report information and relate this information to other sources.

8. Utilizes the resources that are available outside the school such as: public libraries, community resource people, government agencies, and field studies.

Grade Nine

The Student:

1. Organize effectively information from print, non-print and oral sources through the use of appropriate techniques of note-taking such as: outlining and summarizing. Paraphrasing will be developed at this level.

2. Identify and judge the purpose, theme in print, non-print and oral sources. Bias will be emphasized at this level.

3. Locates and uses information and recognizes the differences in primary and secondary sources.

4. Develop the skill of keeping a record of resources used in correct bibliographic format.

5. Develop the skills of acknowledging direct quotes from sources of information using the correct footnoting format.

6. Shares information or ideas through discussion focusing on reaction to and respect for others' opinions.

7. Reads maps, atlases, charts, graphs, diagrams, photographs and statistics to locate and report information and relate that information to other sources.

8. Utilizes independently resources which are available outside the school such as public libraries, community resource people, government agencies and field studies.

Note: Many similarities exist in the wording of the skills at the junior high level. Obviously, the level of difficulty increases as the grade level increases.

APPENDIX B

Vancouver School Board Library Services Cooperative Program Planning and Teaching Checklist

INFORMATION SKILLS:

Primary (K-3)

Indicate the grade level at which you introduce each skill. (Introduction means (a) students at that level need the skill and (b) the majority of students could master the skill appropriate to the grade level.)

The Student:	**Grade Level**
1. demonstrates enjoyment in the resource center without supervision	_____
2. learns borrowing procedures of the resource centre	_____
3. learns to recognize favorite authors, illustrators, characters	_____
4. learns the parts of a book's cover ... title, author, illustrator	_____
5. learns to recall information based on print or non-print materials	_____
6. alphabetizes to the first letter and locates words in a picture dictionary	_____
7. learns the location of easy books	_____
8. learns the location of nonfiction books	_____
9. locates story books and nonfiction books	_____
10. alphabetizes to the second letter and locates words in a picture dictionary	_____
11. alphabetizes to the third letter and locates words in a picture dictionary	_____
12. recognizes main idea and sequence in stories	_____
13. learns the location of nonprint materials	_____
14. is aware of the newspaper as a source of information	_____

15. learns a beginning knowledge of the card catalog _____

16. demonstrates careful use of equipment (e.g. filmstrip viewer and tape recorder) _____

17. knows how to take care of books _____

18. learns how fiction books are arranged _____

19. recognizes the difference between a dictionary and an encyclopedia and what each is used for _____

20. learns to pick out the key words in a question _____

21. learns to use the table of contents and index as guides to the contents of a book _____

22. learns how nonfiction books are arranged _____

23. is aware of magazines for recreational reading _____

24. recognizes main idea, sequence and characters in stories _____

25. understands and selects root words _____

26. is able to convey information orally using complete sentences _____

27. is aware of magazines for information purposes _____

28. is selective in choosing a book for enjoyment or appropriate for a purpose _____

29. conveys information orally, with confidence, using complete sentences _____

30. uses books to locate specific information _____

31. learns to use an encyclopedia of the appropriate reading level _____

32. uses filmstrips to locate specific information _____

33. recognizes main idea, sequence, characters mood and setting in stories _____

34. learns to take notes using key words and phrases _____

35. is able to convey information in written sentences _____

36. learns to present information in a variety of ways and can selection from 2 or 3 given choices _____

37. uses pictures to gain information and to present information _____

Intermediate (Grades 4-7)

Indicate the grade level at which you introduce each skill. (Introduction means (a) students at that level need the skill and (b) the majority of students could master the skill appropriate to the grade level.)

The Student:	Grade Level
1. learns to use guide words as aids in locating specific words	_____
2. learns to use entry words	_____
3. learns to use context clues in selecting the appropriate meaning of new words	_____
4. learns to use a junior thesaurus as a source of synonyms	_____
5. learns that the card catalog is divided into subject, author, title, or has three types of cards	_____
6. learns to use an atlas for information purposes	_____
7. understands (can state) a purpose for reading for information	_____
8. learns to paraphrase information or take point form notes on a given sub-topic(s), using one source	_____

9. learns to understand and use an Atlas, index and map guide _____

10. learns to use point form notes to write a paragraph in his/her own words _____

11. learns to use dictionary aids such as pronunciation, symbols, syllabication and accent marks _____

12. learns the arrangement of nonfiction materials on the shelf (i.e. a basic understanding of the Dewey Decimal System) _____

13. learns to use the card catalog to locate a specific book, either by author or title _____

14. learns to use the pamphlet file as a source of information _____

15. is aware of and learns to make use of resources available outside the school (public library, community resource people, government agencies) _____

16. learns to use see and see also references in the card catalog _____

17. learns to write a simple bibliography _____

18. learns to use a variety of reference books as sources of information _____

19. learns to use a variety of indexes to locate information (i.e. Subject Index to Children's Magazines) _____

20. learns that the copyright date is a way of evaluating the currency of information in a given resource _____

21. learns to take notes on a give subtopic(s) using more than one source _____

22. learns to present an oral report using point form notes as a guide _____

23. learns to develop a report outline to organize information _____

24. learns to interpret information in graphs/charts/diagrams _____

25. learns to present information in graph/ chart/diagram form _____

26. learns a search strategy for locating resources on a specific topic _____

27. learns to use dictionary aids (e.g. tenses, parts of speech, word origins) _____

28. learns to use an outline to write a short report using his/her own words _____

29. learns to use titles, chapter headings, subheadings as a guide to contents and to establishing a purpose for reading _____

30. learns to compare information from different sources and identify agreement or contradiction _____

31. understands (can state) a purpose for viewing for information _____

32. demonstrates careful use of equipment (film projectors, overhead projectors, cameras, opaque projectors) _____

33. learns basic interview techniques for gathering information _____

34. learns to use different types of maps (e.g. physical, political, population, contour) _____

35. understands (can state) a purpose for listening for information _____

36. learns to participate in group discussions for various purposes (e.g. sharing of information, ideas, opinions, and/or reaching consensus) _____

Sample Information Skills Program

Intermediate Level

This Information Skills Program is organized into six categories or skills clusters:

1. **Orientation:** Finding the way to the library, feeling comfortable in the library, learning the proper handling and care of books, learning borrowing procedures, etc.

2. **Research Strategies:** Techniques for searching for information (i.e. knowing where/how to start, where to look next, steps to follow, how to narrow a topic, etc.)

3. **Locating Information:** Using the card catalogue and other indexes to locate specific, general or subject related information.

4. **Acquiring and Analyzing Information:** Using key words and the techniques of skimming and scanning to locate specific information, comparing and contrasting, classifying, recognizing bias and prejudice.

5. **Organizing and Recording Information:** Notetaking, outlining, interviewing, bibliography.

6. **Communicating and Presenting Information:** Written and oral reports, audio-visual and dramatic presentations, etc.

Grade 4

Locating Information:

1. Uses guide words as aids in locating specific words in dictionaries and encyclopedias.

2. Uses context clues in selecting the appropriate meaning of new words.

3. Can use a Junior Thesaurus as a source of synonyms.

4. Can use a variety of dictionaries appropriate for the Grade 4 level.

5. Can use a variety of encyclopedias appropriate for the Grade 4 level (e.g. Childcraft; Young People's Illustrated).

6. Has a beginning knowledge of the card catalogue (i.e. the card catalogue is divided into subject, author, title, or has three types of cards).

7. Can use the card catalogue to locate a specific book, either by title or by author.

8. Locates title, author, illustrator (a) on the book cover, (b) on the title page.

9. Locates the call number on the book spine.

10. Is aware of the atlas for information purposes (i.e. as a source of maps).

11. Is able to make use of resources available outside the school (public library, community resources and resource people.)

Acquiring and Analyzing Information:

1. Uses context clues in selecting the appropriate meaning of new words.

2. Uses titles, chapter headings, subheadings as a guide to contents.

3. Uses pictures for a specific purpose (i.e. to gain information on specific topics).

4. Identifies key words (phrases) in a question.

5. Uses key words (phrases) to locate information needed to answer questions.

6. Understands that different questions ask for different kinds of facts/information (e.g. Who? questions ask for facts/information about people).

Organizing and Recording Information:

1. Is able to paraphrase information or take point form notes on a given subtopic(s) using one source.

2. Can state the source and authorship of information.

3. Uses a given report outline to organize information.

4. Makes point form notes on a given subtopic(s).

5. Takes notes from (a) filmstrips (b) a tape.

Communicating and Presenting Information:

1. Can state a purpose for reading for information.

2. Understands (can state) a purpose for viewing for information (films and filmstrips).

3. Understands (can state) a purpose for listening for information.

4. Paraphrases information to answer questions (i.e. uses own words).

5. Can participate in group discussions for various purposes (e.g. sharing of information, ideas, opinions, and/or reaching consensus).

6. Can write an expository paragraph of five sentences (including indentation, topic sentence and appropriate punctuation).

Grade 5

Research Strategies:

1. Is able to use a simple search strategy for locating resources on a specific topic.

Locating Information:

1. Uses dictionary entry words.

2. Uses dictionary syllabication as a guide to pronunciation.

3. Can select the correct meaning for the dictionary.

4. Uses the index to an atlas to locate maps.

5. Can use the Children's Magazine Index to locate information in magazines.

6. Uses the card catalogue to locate a book on a given subject or topic.

7. Uses the pamphlet file as a source of information.

Acquiring and Analyzing Information:

1. Can interpret information presented in graph/chart/diagram form.

Organizing and Recording Information:

1. Uses point form notes to write a paragraph in his/her own words.

2. Can develop a simple report outline to organize information.

3. Can use a simple outline to write a short two or three paragraph report using his/her own words.

4. Is able to compile a simple list of resources available on a topic.

Communicating and Presenting Information:

1. Presents an oral report using point form notes as a guide and using concrete or visual aids.

2. Can present information in simple chart/diagram form.

Grade 6

Locating Information:

1. Uses dictionary aids such as accent marks and symbols for parts of speech (n, v, adj., adv.).

2. Knows the organization of the newspaper and the use of its index.

3. Can make use of "see" and "see also" reference int he card catalogue.

4. Uses latitude and longitude to locate specific places on a map.

Acquiring and Analyzing Information:

1. Is aware of the newspaper as a source of information.

2. Recognizes different types of maps (e.g. physical, political, population, contour).

3. Understands that the copyright date is a way of evaluating the currency of information in a given resource.

Organizing and Recording Information:

1. Takes notes on a given (sub) topic(s) using more than one source.

2. Lists resources used including author, title, date.

3. Can use basic interview techniques for gathering information.

Communicating and Presenting Information:

1. Demonstrates careful use of equipment (overhead projectors, opaque projectors, cameras).

2. Writes a narrative paragraph of five sentences (including indentation, topic sentence, developing sentences, concluding sentence, proper punctuation).

Grade 7

Locating Information:

1. Can use indexes to encyclopedias to locate information.

2. Uses the newspaper as a source of information.

Acquiring and Analyzing Information:

1. Can compare information from different sources and identify agreement or contradiction (e.g. encyclopedia articles, newspaper articles, etc.).

2. Can use a given map scale to measure distance on a map.

3. Is able to proofread, using simple standard symbols, and identify omissions, insertions, spelling, punctuation, paragraph, indentation, tense.

Organizing and Recording Information:

1. Can write a simple bibliography, in proper format, for resources uses.

Communicating and Presenting Information:

1. Writes an explanatory paragraph of five sentences (including indentation, topic sentence, developing sentences, concluding sentence, proper punctuation).

Source: Emergency Librarian (1985, September-October), 13.1, pp. 14-17.

APPENDIX C

Student Assignment Sheets for Each Centre

Introduction: The Confederation Fight

Newfoundland was the first British North American Colony to gain responsible government (1855). We could now make our own laws and control our own finances. With the Depression of the 1930s, Newfoundland's economy collapsed. A Royal Commission, appointed by the British Government, recommended that Newfoundland be ruled by Commission Government (a governor and six commissioners appointed by the British Government) until such time as our economic recovered. This type of government lasted from 1934-1949. Newfoundland had lost its independence.

Purpose

The purpose of this project is to prepare you to write an editorial. You will spend the first six periods collecting information on Newfoundland's Entry into Confederation. You will then use that information to write an editorial.

Sources of Information

1. Video Joey.
2. Video As Loved Our Fathers.
3. Video Confederation.
4. Newspapers: (a) The Independent; and (b) The Confederate.
5. Essay The Tenth Province.

6. Anti-Confederation Song/Political Cartoons.

7. Resource Person: Mr. Tom Cahill.

Organization and Procedure

1. This project will be done in three(3) parts: (a) collecting information; (b) organizing information, and (c) write editorial.

2. You will be assigned a group and a teacher. You will work in that group for the duration of the project.

3. You will use six sources to do research on the topic "Confederation." Each of these sources will be located in a different classroom:

Video Joey	Room 301
Video As Loved Our Fathers	Room 302
Video Confederation	Room 303
Essay Tenth Province	Room 305
Cartoons and Song	Room 305
Newspapers	Library
Resource Person	Library

4. **For the first five days** you will proceed with your group to the various classrooms. While at each of these centres, you are required to:

(a) Take notes on the pros/cons of Confederation. There will be guide sheets to assist you.

(b) Write Bibliography Sheets.

(c) Have your evaluation sheet checked by your teacher.

5. **On the sixth day** Mr. Tom Cahill will visit us. Mr. Cahill is a national award winning playwright from St. John's, who wrote As Loved Our Fathers. You will be expected to pay full attention to this guest speaker, as you will be requested to write the key points of his visit.

You will now have all your information collected.

6. **On the seventh day** you will be given instructions on how to write an editorial.

7. **On the eighth day** you will begin writing the first draft of your editorial.

8. **On the ninth day** you will revise and edit.

9. **On the tenth day** you will submit your editorial.

Remember:

It is YOUR responsibility to have your assignment completed on time.

Good Luck

Evaluation

Resource Record:	**121 points**
Video Joey	20 points
Video Confederation	25 points
Video As Loved Our Fathers	14 points
The Tenth Province	22 points
Political Cartoons/Songs	6 points
Newspapers Confederate/Independent	24 points
Tom Cahill Speech	10 points
Bibliography:	**12 points**
Completeness	2 points
Order	2 points
Spelling	2 points
Punctuation	2 points
Capitalization	2 points
Indention	2 points
Other:	**5 points**
Total	**138 points**

The Tenth Province

Name:_____ Date:_____ Mark:_____

Background:

At this station, please find copies of the article The Tenth Province. From the information contained in that article, you are to complete the following exercises. Read the directions carefully and make sure you understand them before you continue.

Task:

Each student is to have access to a copy of the article. Read the first paragraph of the article and briefly answer the following questions:

1. Who? _____
   _____
2. What? _____
   _____
3. When? _____
   _____
4. Why? _____
   _____

Read the last paragraph of the article and briefly answer the following questions:

1. Who? _____
   _____
2. What? _____
   _____
3. When? _____
   _____
4. Why? _____
   _____

The Tenth Province

Name:_____ Date:_____ Mark:_____

Background:

The National Convention ran from September, 1946 to January, 1948. Shortly after it opened, J.R. Smallwood gave a speech to try and push to have the Convention send a delegation to Ottawa to investigate the possibilities of Confederation with Canada.

Task:

Break up into small groups of two or three. Each group is to have its own copy of the article. Find the exerpts of that Smallwood speech which was referred to above. In your own words, summarize the point he was trying to make.

_____

_____

_____

_____

_____

Find the paragraph that begins: "People in small coastal Communities ..." Read it and the paragraph that follows. Outline the TWO MAIN POINTS that the anti-Confederates were trying to get across to the people of the small coastal communities.

1. _____

_____

_____

2. _____

_____

_____

The Confederation Fight: Summary

The National Convention Delegates fell into TWO MAIN GROUPS. Those backing _____ Government which meant _____

_____

and those backing _____ Government, which meant _____

_____.

However, a small THIRD GROUP, which was led by _____

_____, proposed union with

_____.

On June 3, 1948 the people voted _____% for Responsible Government, 41.1% for _____ and _____% for Commission of Government. There was no absolute majority, so a run-off referendum was set for _____ _____. The results of this vote were as follows:

_____ people or _____% voted for _____.

_____ people or _____% voted for _____.

Shortly afterwards, representatives of Canada and Newfoundland met to work out **The Terms of Union.** Newfoundland was represented by:

1. _____ Chairman
2. _____
3. _____
4. _____
5. _____
6. _____

Political Cartoons

Background:

Modern political cartoons began around the time of Confederation and they became regular features in Canadian newspapers by the 1890s. In the early 1900s, political cartoons played a prominent role in the lives of Canadians. People depended on the cartoon to put issues into perspective.

Task:

To complete this centre on "Political Cartoons" you must: Choose two(2) of the following cartoons and answer the questions.

(a) "It will be a clean sweep."
(b) What Confederation Will Mean to Newfoundland.
(c) We Arrest You in the Name of Confederation.

1. Name of cartoon: _____.
2. Is the cartoon in favor of Confederation? _____.
3. How can you tell? _____

_____

_____

_____

Anti-Confederation Song

Name: _____

Room Number: _____ Date: _____ Mark: ____

Background:

At this center, please find copies of the song entitled Anti-Confederation Song. It was written in the 1860s to help persuade the undecided Newfoundlanders, **to vote against Canada.** When the topic of confederation came up again in the 1940s, the **song was reintroduced** to a new general of Newfoundlanders, who were faced with the same decision of their forefathers.

Task:

1. Read the words of the song.
2. Re-read this song.
3. Complete the following information.

   (a) Identify at least **TWO fears or concerns** that are mentioned in the song. (You may be general here).

   _____

   _____

   _____

   _____

   (b) Identify at least **THREE promises made by the pro-confederates** in the song. (Be specific here).

   _____

   _____

   _____

   _____

The Confederation Fight

Background:

Have you ever wondered why people acted as they did in the past? What were they thinking? What was their motivation? One way to answer these questions is by reading primary sources. A primary source is a document--letters, diaries, pamphlets, newspapers, commentaries--written at the time of the event. At this station, find copies of pages taken out of two newspapers that were in circulation at the time of the Confederation fight. The purpose of this exercise is to look for **bias** in the articles written. The word bias in this context refers to the opinions stated by an author so as to try and influence the reader and persuade him or her to agree with what is being written.

Task:

Locate the pages from The Independent and The Confederate newspapers. Find the following articles:

The Independent

- "Evidence That the Whole Thing Is A 'Frame Up'"
- "What Will Happen to Newfoundland?"
- "Real Facts"
- "Let Us See Why"

The Confederate

- "Let Us Settle It Now"
- "An Appeal"
- "Mothers Read This"
- "A Lot of Money"

From the above headings, choose TWO ARTICLES from EACH PAPER and complete the following assignment. CAREFULLY read the article. Then, from the questions found on the attached pages, **answer the following questions.**

Name: _____ Date: _____

Newspaper: _____

Title of Article: _____

1. What news fact is the article about?

_____

_____

_____

_____

_____

2. Is the writer for or against the issue? How can you tell?

_____

_____

_____

_____

_____

3. What reasons are given for the position or point of view expressed?

_____

_____

_____

_____

_____

Name:_____ Date:_____ Mark:_____

Joey (Video)

Background:

At this centre, you will view part of a play which deals with some of the key people, groups and issues which dominated the fight for Confederation in Newfoundland in 1949.

Task:

View the videotape Joey **until the end of Act 1** (approximately 45 minutes). While watching, **make jot notes** under the following headings to identify the key people and the arguments for and against Confederation in Newfoundland in 1949.

Key People:

Name at least **four(4) key people or groups** other than Joey - **two(2) for Confederation and two(2) against it.**

For:

1. _____
2. _____

Against:

1. _____
_____

Arguments for Confederation (at least nine(9)).

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

Arguments against Confederation (at least seven(7)).

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Name:_____ Date:_____ Mark:_____

Confederation (Video)

Background:

As this centre you will find a video, entitled Confederation. This video is divided into two parts: Part 1 deals with the background leading up to the campaign for and against Confederation; Part 2 looks at the campaign and results of the vote. Throughout the video, keep in mind the pros and cons of Confederation.

Task:

Before watching this video, look at the questions below first. **You are expected to take JOT NOTES** as you watch the video. Then answer the questions.

Part 1 Questions

1. Who were the two leaders, for and against, Confederation?

   _____

   _____

2. What attempt was made to unite Newfoundland economically to the United States in 1890? Was it successful?

   _____

   _____

3. What events allowed Newfoundland to think of itself as a nation?

   _____

   _____

4. What occurred in the 1930s? Briefly describe conditions.

   _____

   _____

   _____

5. 1933 - Why such an important date for Newfoundland?

   _____

   _____

Part 2 Questions

1. Briefly tell what happened at the National Convention.

2. (a) What were the three choices of the referendum?

   (b) Who represented each choice?

   (c) What arguments did each use? (at least five of each).

3. (a) What were the results of the first vote?

   (b) What two choices were on the second vote?

   (c) What occurred between the first and second vote that may have influenced the vote?

   (d) What were the results of the second vote?

Name:_____ Date:_____ Mark:_____

<u>As Loved Our Fathers</u> (Video - by Tom Cahill)

Background:

This video highlights the conflict in a Newfoundland family which was brought about as a result of the battle for Confederation. Also emphasized are the reasons why some people voted for Confederation, while others voted for Responsible Government. The first act takes place on the evening of the second referendum.

Task:

Before you watch this video, read carefully the questions below. You will be required to write your answers to each question in JOT NOTE FORM which you are viewing.

1. Give a MINIMUM OF FIVE reasons why the female characters voted for Confederation.

_____

_____

_____

_____

_____

_____

2. Give a MINIMUM OF SIX reasons why Con and his friends voted for Responsible Government.

_____

_____

_____

_____

_____

_____

3. BRIEFLY state the contents of the Orange Letter in your own words. Why was this letter distributed?

4. Why was a second referendum necessary?

Editorials

Background:
An editorial is a short article that expresses the views of one person on a topic of current events or general interest.

The following are the characteristics of an editorial.

1. The beginning sentence should grab the reader's attention and let the reader know the subject of the editorial.
2. There must be a number of arguments presented to support the writer's viewpoint.
3. The arguments must be based on knowledge of the facts and presented in a fair manner.
4. Paragraphs should be well organized, short and to the point so that the reader can easily follow.
5. Language should be clear and easy to understand. Commonly understood words and phrases should be used.
6. The ending paragraph should restate or summarize the author's views.

Task 1:
Read the editorials provided. In your notebook, answer the following questions based on the editorial you are reading.

1. Read the beginning sentence. Does it capture the reader's interest and inform you of the topic? Rewrite the beginning sentence in another interesting way.
2. Briefly list the arguments presented in the rest of the editorial which support the author's point of view.
3. How many paragraphs are there? Write the main idea of each.
4. Is the language easy to understand? Write any words or phrases you don't understand with their means.
5. Does the ending sentence summarize the author's point of view? What is the author's point of view?

Task 2:

Read the second editorial. Apply the above questions to the editorial but do not write your answers. Which editorial did you find more interesting? Tell why.

Bibliography

The final section of the report will be the bibliography, the page on which you list every reference you used to do your research.

In a bibliography, the author's last name appears first. If a reference does not credit an author, alphabetize it by the first word of its title, but disregard any A, An or The.

Each entry is begun at the margin, but when the entry requires more than one line, each subsequent line is indented five spaces. A typical entry might look like this:

Trachtenberg, Marvin. The Statue of Liberty. New York:" The Viking Press, 1976.

Periodical entries are similar to book entries, except that the name of the article precedes the name of the publication and a comma follows the publication name and the date. An article from a daily newspaper might appear as follows:

Knight, Michael. "Tourism Gripped by Fears About Gasoline." The New York Times, 27 July 1979, Sec. 1, p. 1.

If no author is cited, the entry might appear as"

"Carter at the Crossroads." Time, 23 July 1979, pp. 20-29.

The Bibliography Page

The bibliography is begun on a separate page and is always the last page of the report. The word "Bibliography" is centred approximately two inches (5cm) down from the top of the page. The bibliography page might look like this:

Bibliography

Fishbein, Morris. The Popular Medical Encyclopedia. New York: Doubleday and Company, 1977.

Kimber, Diana Clifford, and Caroline F Gray. Textbook of Anatomy and Physiology. New York: The Macmillan Company, 1952.

Newman, Gerald, ed. The Encyclopedia of Health and the Human Body. New York: Franklin Watts, 1977.