A STUDY OF THE LEVELS OF CONCERNS OF ELEMENTARY CLASSROOM TEACHERS REGARDING THE IMPLEMENTATION OF RESOURCE-BASED LEARNING

DOREEN MARY McCARTHY DWYER

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by

© Doreen Mary McCarthy Dwyer, B.A., B.A. (Ed.)

A thesis submitted to the School of Graduate Studies in partial fulfilment of the requirements for the degree of Master of Education

Memorial University of Newfoundland

January 1993

St. John's Newfoundland

ISBN 0-315-82638-X

ABSTRACT

The main aim of this study was to ascertain the concerns of classroom teachers regarding the implementation of resource-based learning in Newfoundland schools. Teachers' thoughts, perceptions and fears regarding this innovation represent their concerns. Several factors such as gender, age, size of student population, academic qualifications, date of last university study, teaching experience and the services of a full time learning resource teacher were studied to determine if they influenced the intensity of these concerns. The attitude of principals, learning resource teachers and classroom teachers was also examined to determine if differences existed in the levels of these concerns.

The subjects for this study were 277 elementary (grades 4-8) classroom teachers who were employed with the Roman Catholic School Board for St. John's during the school year 1991-92. Data were received from 145 or 52.3 percent of the sample.

The data were gathered by using a self-administered questionnaire which consisted of a modified version of the Stages of Concern Questionnaire, as well as questions designed to gather demographic and implementation data about the subjects. Stratification into various sub-groups was based on the responses to these questions.

The teachers who responded expressed varying levels of intensity on the seven Stages of Concern: Awareness, Informational, Personal, Management, Consequence, Collaboration and Refocusing. The majority of teachers (83.5 percent) had their highest level of concern on the self-oriented concerns - Awareness, Informational, Personal and Management. This indicates that these teachers need more general information about resource-based learning, what it is, how it works, what will be required to implement it and what are its long terms effects.

The study found that gender was of minimum significance and did not influence the concerns of classroom teachers.

Age resulted in differences between the youngest and oldest classroom teachers on the Informational and Personal Stages. The results indicate that the youngest classroom teachers expressed intense personal concerns.

The size of the student population did not result in any significant differences in the intensity of concerns. Classroom teachers working with smaller student populations indicated intense managerial concerns.

Academic qualifications resulted in statistically significant differenes for classroom teachers with doctorate degrees but only at the awareness level.

The date of last university study in the area of education was of minimum significance and did not influence the concerns of classroom teachers.

The study found that the less experienced classroom teachers expressed high levels of self-oriented concerns.

The services of a full time learning resource teacher resulted in statistically significant differences for classroom teachers but only at the informational level.

The attitude of the principal towards learning resource programs resulted in some differences on the first three stages. The more favourable the principal's attitude was towards learning resource programs, the lower the intensity of the classroom teachers' concerns.

The attitude of the learning resource teacher towards learning resource programs resulted in some differences on the self-oriented stages. Classroom teachers working with the learning resource teacher with the most favourable attitude towards learning resource programs had resolved their self-oriented concerns and had now reached the task and impact levels.

The attitude of classroom teachers towards learning resource programs resulted in differences in the intensity of concerns. Classroom teachers with favourable attitudes towards learning resource programs expressed low levels of self-oriented concerns but high levels of impact concerns.

ACKNOWLEDGEMENTS

This study could not have been completed without the assistance and cooperation of a large number of individuals. The author expresses sincere gratitude to all those who helped in any way.

Appreciation is expressed to Ms. Geraldine Roe, the Associate Superintendent of the Curriculum and Instruction Division of the Roman Catholic School Board for St. John's for granting permission to do this study.

The author is indebted to the elementary classroom teachers and principals who found time to assist with the collection of the data for this study.

A sincere thank you is extended to my advisor, Dr. Frank Cramm, whose suggestions and guidance were invaluable in the design, conducting and reporting of this study. Thanks are extended as well to the examining committee.

A very special thank you goes to Gail Quinlan and Michelle Shapter for their valuable service.

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BACKGROUND TO THE STUDY

"Our society regards education as a means of preparing each generation for productive and effective living" (Davis, 1969, p. 4). This statement continues to have validity; however, advances in technology rapidly change the nature of society and as a result the educational goals of the present have to be different from those of the past if we are to prepare our students for participation in today's information-rich society.

Liesener (1985) says today's youth face an information revolution and describes this revolution in the following passage:

> Modern society is undergoing profound technological and social changes brought about by what has been called the information revolution. This revolution is characterized by explosive developments in electronic technologies and by their integration into complex information systems that span the globe. The impacts of this revolution affect individuals, institutions and governments - altering what they do, how they do it and how they relate to one another. If individuals are to thrive economically and socially in a world that will be shaped to a large degree by these technological developments, they must adapt through education and training. (p. 6)

Focus on Learning: An Integrated Program Model for Alberta School Libraries (Alberta Education, 1985) describes the world faced by today's youth as follows:

These students live in a world fuelled by change.

> A world of science-fiction predictions come true and catch-phrase realities. Mediums have become messages. The world, a global village, with the haunting face of the Third World famine juxtaposed alongside the banalities of television situation comedies. Future shock jolts us daily as the technology of our information society races ahead of knowledge and wisdom. (p. 1)

Naisbett in Metatrends suggests that "we are moving into a world that will be information rich but also a world which may be knowledge poor because citizens will not be able to handle information effectively" (cited in Haycock, 1985a, p. 33).

Naisbett further states our society is "drowning in information but starved for knowledge." Students need information "downproofing." They must acquire skills that will help them find, interpret, synthesize meaningful messages - "messages that are buried in a flood of uncontrolled, unorganized information" (cited in Alberta Education, 1985, p. 2).

Brown and Kennedy (1986) believe that "students need to know how to access the information that is bombarding them; they must learn how to select, evaluate and utilize that information" (p. 4). Students must learn how to manage information in order to become independent learners and problem solvers. To achieve this instruction in information management, skills must be broad and more process oriented. Focus must go beyond locational skills and "correct answers" and more to "strategies that will help students to develop insight and facility in structuring successful approaches to

solving their informational needs" (Mancall, Aaron and Walker, 1986, p. 199).

Haycock (1985a) describes the importance of handling information effectively with this passage:

> Helping youngsters develop a commitment to informal decision-making, through the ability to locate, process and use information effectively, is going to be critical to the continuation of democratic societies and to technological achievement. (p. 33)

Marland (1987) says "individuals have an increasing need to be able to find things out; never before have lives depended so much on the ability to handle information successfully" (p. 9). Students, therefore, need to "search out what they require, to assess it critically, to examine the ideas and facts offered and then to make use of the findings" (p. 9). This "learning to learn" which begins at school, continues throughout adult life. It is the responsibility of the school to help its students cope with learning.

Norris (1985) points out that "students need more than the ability to be better observers; they must know how to apply everything they already know and feel, to evaluate their own thinking and especially to change their behaviour as a result of thinking critically" (p. 43).

There is no denying that the age of technology is upon us and that it permeates nearly every phase of our daily lives. In this rapidly changing world it is becoming apparent that people may have to retrain several times in

their lifetime. Therefore, "it is incumbent upon teachers that they help students develop the skills of learning" (Sawtell, 1982, p. 102).

While it is true that school libraries have always inspired a few students to life-long independent learning, an occasional random success is just not good enough for today. Fast (1976) says "the future will require almost everyone to possess this talent for self-direct knowledge" (p. 23). She further suggests that:

> The educated person should have a thirst for knowledge. He/She should be motivated to keep on learning throughout a lifetime. In a changing society, this means that people must learn "how to learn" because new knowledge is being constantly created by the current of change. (p. 21)

New Demands in Education

Since the information world is characterized by constant change, the curricula and programs developed to teach management of that world must face continued revision. Today's educational system is responsible for developing those skills that will lead to life-long learning. To effectively develop such skills curriculum planners now emphasize the use of resource-based learning.

Partners in Action (1982), a document from the Ontario Ministry of Education, defines resource-based learning as "planned educational programs that actively involve students in the meaningful use of a wide range of appropriate print,

non print and human resources" (p. 7).

Learning to Learn (1991), a document from the Newfoundland Department of Education, states that:

> The main goal of resource-based learning is to provide the opportunity for all students to develop independent learning skills, in conjunction with the acquisition of a basic body of knowledge which will enable them to become life-long learners. Full attainment of this goal will require that resource-based learning be implemented in every classroom in the province. (Forward)

Haycock (1981) states that due to changing environments and the information explosion, "instruction now centers more on the process of learning itself than on subject content" (p. 4). It is becoming far more important that the student understands the "factors which contribute to a given situation than to memorize data describing it" (p. 4).

Goodlad (1983) contends that schools must confront:

> The need to involve students in a variety of ways of thinking, to introduce students to concepts and not just facts, to provide situations that provoke and evoke curiosity, to develop personal standards of work and ensure the satisfaction of meeting them, to develop appreciation of others through cooperative endeavours, to be concerned about the traits of mind and character fostered in the schools and so on. (p. 19)

Focus on Learning: An Integrated Program Model for Alberta School Libraries (Alberta Education, 1985) states that a learning resource centre program:

> Widens, deepens and personalizes learning by involving students in the planned and purposeful use of resources. This resource utilization is designed to assist them to grow in their ability to find, generate, evaluate and apply information. These information skills will, in turn, prepare

> students to function effectively as individuals and full participants of society. (p. 3)

This document further states that "if schools build on a foundation of basic survival skills, students will be better prepared to progress. Students will be ready to learn how to anticipate, how to imagine alternatives and how to engage in lateral and holistic thinking" (p. 2). Schools need to teach these critical thinking skills if students are to meet the future with confidence and hope. At the heart of the schools' goals are student outcomes - "these things that students should be able to know, feel, do or think if they are to take a full participatory role in society" (p. 2). "Learning how to learn" is one of the most fundamental of these student outcomes.

Beswick notes certain aspects of modern society which demand the use of resource-based learning:

(1) There is more emphasis on concepts than on facts, since we cannot possibly know all the factual information in our information-rich society.

(2) The knowledge explosion means that there is a tremendous amount of new knowledge being generated each year. A prime objective of education is to help learners attain research skills so that they can effectively and efficiently access the massive amounts of information.

(3) The rapid changes that take place means that there are always new knowledge and skills to learn. Learning will not cease when we finish school but we must be skilled at learning throughout our lives - the "life-long education" concept.

(4) Authority is questioned today as never before, which means that students are less likely to accept without question what they are told - they need to be given opportunities to discover for

themselves.

(5) Individual differences are important and there is increasing awareness and sensitivity to these differences.

(6) The mass communications media such as television means that students arrive at school already possessing considerable general knowledge.

(7) New technologies for independent, individualized instruction make it possible to offer resource-based learning as never before. (cited in Newfoundland Department of Education, 1992, p. 5)

In summary, students need to know what information is available, how to locate it and most importantly how to use it effectively.

New Challenges for Classroom Teachers

Teaching has long been seen as a complex process, requiring attention to the individual learner and his/her needs. "Good teaching is recognized as the successful matching of individual learners of varied abilities with experiences most likely to effect in them desired changes in thinking and behaviour. Learning has replaced teaching as a the centre of instructional planning" (Branscombe, 1978, p. 297).

Resource-based learning places the teacher in a new role. Teaching can no longer be limited to one location or setting. Instead, teachers use a variety of resources in different formats; they work together with other teachers (including the learning resource teacher if one is

available), and they become facilitators of learning rather than the sole source of knowledge.

Resource-based learning requires "cooperatively planning learning experiences based on precisely stated objectives which are formulated to meet the learning needs and learning styles of individual students" (Brown, 1988, pp. 12-13). This careful planning of instruction based on individual needs is a professional innovative role for teachers. It will not be successfully implemented, unless the classroom teacher has "a favourable and cooperative attitude towards it and is willing to accept innovation and improvement" (Klein, 1972, pp. 56-57).

Purpose of the Study

Considerable demands are placed on teachers with the introduction of resource-based learning. Brown (1988) suggests that in many classrooms it means "changing the very nature of teaching to meet the expectations for teaching as exemplified in learning resource programs" (p. 12)

When such new and innovative practices are introduced, it is important to recognize the concerns of classroom teachers for as Blair (1978) states "much of the success of a quality resource centre program will be contingent on the teachers' receptiveness to these ideas" (p. 98).

The degree to which teachers are receptive will be

related to their level of concerns. The concept of concern has been defined as:

> The composite representation of the feelings, preoccupation, thought and consideration given to a particular issue or task is called concern. Depending on our personal make-up, knowledge and experiences, each person perceives and mentally contends with the given issue differently; thus there are different kinds of concerns. The issue may be interpreted as an outside threat to one's well being, or it may be seen as rewarding. There may be an overwhelming feeling of confusion and lack of information about what "it" is. There may be ruminations about the effects. The demand to consider the issue may be self-imposed in the form of a goal or objective that we wish to reach, or the pressure that results in increased attention to the issue may be external. In response to the demand, our minds may explore ways, means, potential barriers, possible actions, risks and rewards in relation to the demand. All in all, the mental activity composed of questioning, analyzing and reanalyzing, considering alternative actions and reactions and anticipating consequences is concern. An aroused state of personal feelings and thought about a demand as it is perceived is concern. (Hall, George, & Rutherford, 1977, p. 5)

The main purpose of this study was to determine the levels of concerns of elementary classroom teachers regarding the introduction of resource-based learning in their schools. It also investigated differences that might exist between the concerns of elementary classroom teachers based on factors such as gender, age, student population of the school, academic qualifications of the teacher, date of last university study, teaching experience, services of a full time learning resource teacher, attitude of the principal towards resource-based learning, attitude of the learning resource teacher towards resource-based learning and attitude

of classroom teachers towards resource-based learning. Knowledge of such concerns is of great importance to the principal and especially the learning resource teacher in planning and designing in-service programs. The expressed concerns will be analyzed together with implementation and demographic data to see if certain factors influence the levels of concerns of classroom teachers.

The specific questions that this study attempted to answer are outlined in Chapter III, The Design of the Study.

Description of the Study

The population of this study was the elementary classroom teachers of the Roman Catholic School Board for St. John's during the school year 1991-92. This population involved thirty schools and 277 teachers.

A survey which used a self-administered instrument was used to gather data for this study. Each teacher in the study was given a questionnaire (Appendix A) that attempted to determine his/her level of concerns regarding the implementation of resource-based learning in their schools and to ascertain other information about the respondent. This instrument consisted of two sections: the first, a modified version of the Stages of Concern Questionnaire (Hall et al., 1977) and a second, which gathered data about the respondents. The data collected were used to answer the questions posed by this study.

Limitations of the Study

This study was conducted by surveying the elementary classroom teachers of the Roman Catholic School Board for St. John's during the winter of 1992. Certain delimitations were imposed on the results:

(1) The population that was chosen consisted of elementary teachers from the Roman Catholic School Board for St. John's and the results can only be generalized to that population.

(2) Although the elementary teachers were asked to complete the questionnaires individually, there may have been some collaboration with a resulting influence on the data.

(3) The size of the return of the questionnaires was also a limitation.

Outline of the Thesis

In Chapter II of this report, the literature related to resource-based learning as a philosophy of education is examined. One model of educational change - the Concerns-Based Adoption Model (C-BAM) (Hall, Wallace, Jr. & Dossett, 1973) - will be described in some detail since it forms the conceptual base for the assessment of teacher concerns as conducted in this study.

The outline of the design of the study will constitute Chapter III with a description of the sampling procedure, the instrumentation and the questions to be answered together with a description of the analysis to be performed on the data to answer each question.

In Chapter IV the results of this study are described on a question by question basis.

A summary of the study and a discussion of the results will follow in Chapter IV. This chapter will conclude with some recommendations based upon the results and the implications of these results.

CHAPTER II

REVIEW OF THE LITERATURE

Resource-based learning offers today's students an opportunity to "learn how to learn" and prepare themselves for a world of increasing knowledge and changing technology. "Students cannot expect to lead successful productive lives without the ability to use information. This is a basic skill for which the educational community must accept responsibility" (Whitney, 1988, p. 7). It can be argued that every student deserves the opportunity to become information literate.

The review of the literature will briefly describe the philosophy of resource-based learning. It will describe one theory of educational change - the Concerns-Based Adoption Model (C-BAM) (Hall et al., 1973) - which focuses on the individual as the frame of reference. C-BAM, developed by researchers at the University of Texas Research and Development Centre for Teacher Education, provides one approach which may help the educational community in the implementation of resource-based learning. Three aspects of C-BAM will be examined to see how learning resource teachers can best apply the model to implement cooperative planning and team teaching. The Innovation Configuration dimension defines the innovation; the Stages of Concern dimension

addresses how the classroom teachers "feel" and the Levels of Use dimension describes what the classroom teachers "do". All three dimensions are concerned with the effective implementation of any educational innovation.

Resource-Based Learning

The Newfoundland Department of Education has a commitment to a philosophy of education:

> (1) which places the student at the centre;
>
> (2) which advocates the provision of learning experiences that meet the learning needs of individual students; and,
>
> (3) which actively involves them in the learning process. (Newfoundland Department of Education, 1991, p. 1)

A resource-based learning approach is recommended by the department in fulfilling this commitment. This approach requires the efforts of the whole educational community - principals, learning resource teachers and classroom teachers.

A resource-based learning approach has the following features:

(1) Students actively participate in their learning;

(2) Learning experiences are planned based on instructional objectives;

(3) Learning strategies and skills are identified and taught within the context of relevant and meaningful units of study;

(4) A wide variety of resources is used;

(5) Locations for learning vary;

(6) Teachers act as facilitators of learning; continuously guiding, monitoring and evaluating student progress; and

(7) Teachers work together to implement resource-based learning across grade levels and subject areas. (Newfoundland Department of Education, 1991, p. 3)

If a resource-based learning approach is going to be used to prepare students for an information-rich society, then the nature of teaching in many classrooms must change first. Cooperative planning will replace isolated activities. Teachers will use a variety of resources in different formats instead of relying solely on textbooks. Individualized instruction will replace group instruction (Brown, 1988, p. 12). Mathematics will no longer be defined as "computation" but as "problem solving." Reading and writing will no longer be considered as "basic skills" but as "the act of thinking." The classroom teacher will no longer be looked upon as "sage on the stage" but as "guide on the side." (Barker cited in National Staff Development Council, 1993, p. 4) Some classroom teachers may be frightened or threatened by such changes.

The Role of the Principal

In implementing resource-based learning, the principal is "the key player in seeing that a program is developed, supported and enhanced" (Haycock, 1985a, p. 29). The Ontario document, Partners in Action (1982), states clearly that it is the principal "who must establish a climate in the school for cooperation, experimentation and growth" (p. 13). It further states that this climate must be one "in which new ideas are discussed and evaluated and in which teachers are encouraged to take risks and to try new techniques" (p. 16). The principal ensures that time is set aside for the classroom teachers and the learning resource teacher to cooperatively plan programs. Henri (1987) says "flexible scheduling and resource-based learning go together hand in glove" (p. 10). The principal also provides leadership in the development of a learning skills plan and ensures that the teaching of such skills is a cooperatively planned sequential program fully integrated with classroom activities (Ontario Ministry of Education, 1982, pp. 13-14).

Principals must do everything in their power to help classroom teachers feel comfortable involving the learning resource teacher in curriculum planning, implementation and evaluation activities. Visiting the classroom or learning resource centre while students are involved in resource-based learning and inquiring in the staff room or hallway how

things are going with the new program, will show classroom teachers that he is interested and committed to resource-based learning. Brown (1988) argues that "at the school level, the drive for change and improvement must be spearheaded by the principal" (p. 14). The principal's role of change agent is crucial because it involves changing the attitude of classroom teachers and learning resource teachers towards the learning resource program.

The Role of the Learning Resource Teacher

The learning resource teacher's major task is to "work with classroom teachers to plan, develop and implement units of study which integrate research and information skills" (Haycock, 1985b, p. 106). This task may require the learning resource teacher to assist in the classroom or to arrange opportunities for some teachers to observe in classrooms where resource-based learning has successfully been implemented. It is important to involve the classroom teachers in the development of the materials necessary for the implementation of these units of study.

This cooperative planning process moves the involvement of the learning resource teacher "back to the objectives stage, where the focus is on what students are to learn" (Haycock, 1988, p. 30). Being involved from the very beginning is crucial to the successful implementation of

resource-based learning. Cooperative planning places the learning resource teacher in "a unique position to work as a partner with the classroom teacher, so that the expert in the content to be taught (the classroom teacher) can be assisted by the expert in the learning resources (the learning resource teacher)" (Brown, 1988, pp. 13-14). As partners, the learning resource teachers do not issue directions, but suggest, inform and ask. As partners, they must maintain a flexible program, always willing to modify it to meet the needs of the students and the classroom teachers (Stripling, 1989, p. 138). As partners, they must be very patient with the classroom teachers, always supporting them in this complex process of educational change.

The learning skills plan enables the learning resource teachers to implement change within the school. Haycock (1985b) believes that once the learning skills plan becomes entrenched in the school, it becomes "a foundation for continuing growth and development" (p. 107). By keeping a record of the units of study and the related learning skills for each unit, the learning resource teachers are building a permanent school base for resource-based programs. When they leave the school, the permanent record is left for future use and the new learning resource teachers do not have to start all over.

According to Cleaver and Taylor (1983), learning resource teachers, as change agents, must initiate and

sustain working relationships with classroom teachers. The process for achieving this goal can be characterized as deliberate and incremental. While they suggest that the process may be slow, at least at the beginning, they claim "the trade-off for an unhurried studied process is this: it works" (p. viii).

The Role of the Classroom Teachers

With the resource-based learning approach, classroom teachers need to see the learning resource centre as a fundamental part of the total education system. Cooperative curriculum planning means that the classroom teachers accept the learning resource teacher as a vital member of the staff. It also means being willing to sit down with the learning resource teacher and other teachers and plan together. With resource-based learning, classroom teachers must be willing to let the learning resource teacher become actively involved in the whole instructional process. The learning resource teacher contributes in the formulation of the educational objectives and assists with the selection and effective use of materials in the classroom. In reality, the learning resource teacher becomes "an extension of the teacher" (Blair, 1978, p. 94).

According to Aaron (1981), this is quite a challenge since "some teachers will feel very insecure in this

cooperative role; they will need continuing positive reinforcement" (p. 61). These insecurities could lead to concerns of various levels. It is important to be aware of these concerns because classroom teachers play such a vital role in the implementation of resource-based learning. As Fullan (1982b) states "educational change depends on what teachers do and think - it's as simple and as complex as that" (p. 107).

Leithwood (1982) believes "it is the classroom teacher who possesses the information (about particular students in a particular class) necessary to make the innovation work. The decisions of the classroom teacher will determine the classroom success of the innovation" (p. 250). This information about particular students is necessary when classroom teachers plan learning experiences that will meet individual needs. Similar views are shared by Rutherford (1986) who states "the process of change in schools cannot be studied in a meaningful way without attending to the role of the teachers" (p. 1). The Concerns-Based Adoption Model (C-BAM) was selected for this study because it is "client-centred" and measures the levels of concern of classroom teachers as educational change is implemented.

The Concerns-Based Adoption Model

The Concerns-Based Adoption Model (C-BAM) is a model of

change which describes the stages through which educators move as an innovation comes into a school. This model traces levels of concerns about an innovation from the stages of little or no knowledge to the point at which the individual teacher becomes a fluent user and finally an evaluator of the innovation (Hall et al., 1973, p. 2). According to Loucks (1983), this model describes the changes individual teachers go through as they adopt new programs and how these teachers can be helped to make the necessary changes "in an effective, efficient and humanistic manner" (p. 3).

In Figure 1 (Hord et al., 1987, p. 10), the change facilitator is the learning resource teacher who is central to the framework of the model and is responsible for carrying out actions to meet the needs of the individuals, the classroom teachers (referred to as "i" in the diagram). Based on the model, it becomes evident that both the learning resource teacher and the classroom teachers must be involved in the implementation of resource-based learning. This model is concerns-based or considers the concerns of the individuals throughout the implementation of cooperative planning and teaching. It is based on the argument that in order for an innovation to be successfully adopted in school, it must be accepted by individuals, namely the classroom teachers (Hall & George, 1979, p. 4).

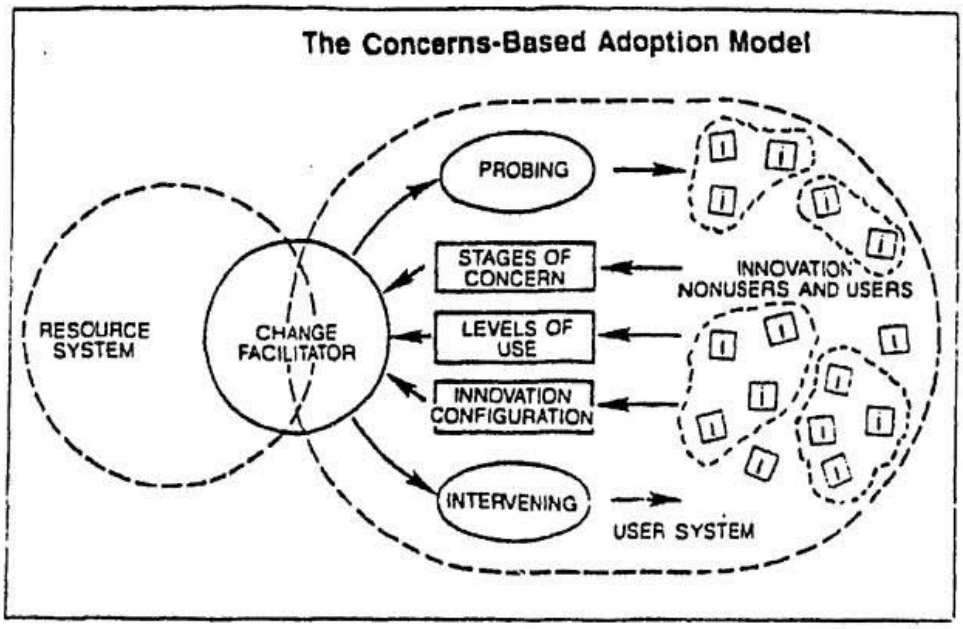

Figure 1

Hord et al., 1987, p. 10

Assumptions of the Model

The C-BAM Model is based on certain assumptions that set the perspective from which change in schools is viewed. This model was developed in response to the failure of other models in bringing about successful change within the school system. The developers argued that the lack of successful change within the school system resulted from the lack of consideration of the individual in the adoption process (Hall et al., 1973, p. 8).

The following assumptions help to form an understanding of the C-BAM Model:

(1) Educational change is a process and not an event. Often school administrators and sometimes even teachers assume that change is the result of an administration decision or a new curriculum acquisition. They assume that teachers will put aside their old strategies or old textbooks and immediately apply an individualized program with great sophistication. They also assume that with the introduction of a new program, teachers will blend their talents into effective teams. As indicated in the C-BAM Model, change takes time and is achieved only in stages (Hall & Loucks, 1978, pp. 37-38).

(2) The individual must be the primary target of any intervention designed to facilitate change within the school system. The C-BAM Model emphasizes working with individual

teachers and administrators in relation to their roles in the implementation of the innovation. According to this theory, institutions cannot change until the individuals within them change (Hall & Loucks, 1978, p. 38).

(3) Change is a very personal experience. Staff developers, administrators and other change facilitators often emphasize the technology of the innovation and ignore the feelings or concerns of the individuals experiencing the change process. In the C-BAM Model, the personal dimension is not only emphasized but considered to be critical to the success or failure of the innovation. Since change is brought about by individuals, their personal satisfaction, frustration and concerns in general all play a part in determining the success or failure of an innovation (Hall & Loucks, 1978, p. 38).

(4) As individuals experience the process of change, they move through identifiable stages or levels. They move through these identifiable stages as they perceive the innovation and as they develop sophistication in using the innovation (Hall, 1978, p. 4).

(5) Many in-service workshops address the needs of trainers rather than trainees. When planning staff development, administrators should use a client-centred diagnostic, prescriptive model. To deliver effective staff development, administrators or change facilitators need to find out where their clients are in the change process and

then address those needs in the in-service (Hall & Loucks, 1978, p. 38).

(6) Change facilitators need to work in a systemic way. They need to constantly evaluate the progress of the individual within the larger context of the total organization that supports the change. As they evaluate the process of change, they have to be constantly ready to adapt interventions in accordance with the information received from the evaluation. However, change facilitators must always be aware of the "ripple effect" that change may have on other parts of the educational system (Hall & Loucks, 1978, p. 38).

(7) A complete description of the innovation in operation is important. Very often change facilitators are not clear or complete in the operational definition of the innovation they are implementing. Frequently, teachers do not know what the innovation is supposed to look like when it is implemented. A concern-based change requires a complete description of what is involved in the innovation when it is in full operation (Hall, 1978, p. 4).

The Innovation Configuration Dimension

The first aspect of C-BAM, the Innovation Configuration Dimension, helps the learning resource teachers to define the innovation and to diagnose their own needs as well as the

needs of the classroom teachers. This concept deals with the identification of the different parts of the learning resource program. Specifically, it means the learning resource teachers must first identify the critical component within which each classroom teacher is working. Some teachers may be working within different components and using different ways to implement a particular component of the resource-based program. Figure 2 (Austrom et al., 1989, pp. 39-40) identifies the critical components of a resource-based program based on cooperative planning and teaching. Learning resource teachers can use this figure to develop their own checklist that identifies the components of cooperative planning and teaching, focuses on those components they view as critical and determines the variations within each component (Austrom et al., 1989, p. 40). Once this has been accomplished, learning resource teachers have defined the innovation and are ready to assist individual classroom teachers in implementing an important educational change - resource-based learning - within our schools.

Learning to Learn (1991) offers the EFFECTIVE Model (p. 7) (Figure 3) to help teachers plan for resource-based learning. This model can be used as a guide for both learning resource teachers and classroom teachers in planning units of study. A permanent file can be created by drawing up the model on a larger scale, allowing more writing space in each block and inserting a place for the name of the unit

Cooperative Planning and Teaching Critical Components

CRITICAL COMPONENT	INNOVATIVE VARIATION	TRANSITIONAL VARIATION	TRADITIONAL VARIATION
Flexible Scheduling	All classes are flexibly scheduled into the library resource centre.	Most classes are flexibly scheduled into the library resource centre.	All classes are timetabled into the library resource centre for a set period every week.
Teacher-Librarian Teaching Time	Teacher-librarians spend approximately 80% of their time involved in cooperative planning and teaching, leaving 20% of their time for administration of the library	Teacher-librarians spend approximately 60% of their time involved in cooperative planning and teaching, leaving 40% of their time for administration of the library.	Teacher-librarians spend approximately 100% of their time teaching scheduled classes and/or on administration.
Cooperative Planning	Teacher-librarians are involved in cooperative planning where *information skills* are integrated into the content areas, either formally or informally at least 2 major units of study per class per year	Teacher-librarians are involved in cooperative planning where *information skills* are integrated into the content areas, either formally or informally at least 1 major unit of study per class per year	Teacher-librarians are not involved in cooperative planning where *information skills* are integrated into the content areas, either formally or informally
Team Teaching	Teacher-librarians team teach with x%* of the staff in one school year	Teacher-librarians team teach with x%* of the staff in one school year.	There is no team teaching
	*The percentage should be determined by the teacher-librarian annually after completing Figure 3.6, Levels of Use of the Innovation, on page 52		
Instructional Strategies	A variety of strategies, such as centres, stations, whole class instruction, small group instruction, which develops independent learners, is planned and carried out	A limited number of strategies that develops independent learners is planned and carried out.	Scheduled classes where children are taught library skills on a weekly basis is in place.
Evaluation	Criteria for evaluation are established during the planning stage and are given to the students at the outset of the unit so they will not only know what is expected of them, but then can be taught how to self-evaluate.	Criteria for evaluation are established during the planning session but not shared with students.	No criteria are established during the planning stage of the unit of study.

(Adapted from: Hord et al., 1987, p. 17)

Figure 2
Austrom et al., 1989, pp. 39-40

EFFECTIVE Model for Planning Resource-Based Learning	
E	Establish general goals and objectives from curriculum guides.
F	Focus on learners to determine their prior knowledge and skills.
F	Formulate specific objectives for the resource-based learning experience.
E	Establish instructional strategies, techniques, and learning activities.
C	Choose learning resources and locations.
T	Timetable access to resources, facilities, and personnel.
I	Implement the plan.
V	Verify that learning is occurring.
E	Evaluate student achievement and the instructional process.

Figure 3

Newfoundland Department of Education, 1991, p. 7

of study, grade level, date and names of classroom teachers involved in the unit. Both learning resource teachers and classroom teachers can keep a copy of each completed unit for future use. The following year teachers need only to pull out their permanent file, up-date it and make appropriate changes. This method will cut down on the amount of preparation time required in the cooperative planning process for all teachers especially those new to the school system.

Using this model, the learning resource teachers can contribute to all phases of the process both as teachers and as facilitators. They can help classroom teachers to:

- Determine the learning strategies and skills to be included in a unit;
- Select appropriate resources;
- Set up learning experiences to meet the objectives of the unit;
- Guide and monitor student progress through the learning experience;
- Evaluate student achievement of learning skills;
- Evaluate the effectiveness of the resources and activities used. (Newfoundland Department of Education, 1991, p. 16)

By contributing to all phases of the process, learning resource teachers can better assist the classroom teachers in providing experiences that meet the needs of all students.

The Stages of Concern Dimension

The second aspect of C-BAM, the Stages of Concerns Dimension, examines the affective dimension of innovation. In other words, how do classroom teachers "feel" when they are involved in the process of change? This dimension deals with the kind of concerns that individuals may experience in relation to an innovation (Hord, 1979, p. 2). Hord (1979) describes these concerns with this passage:

> Individuals experience a variety of concerns at any one time; however, the degree of intensity of different concerns about an innovation will vary depending on the individual's knowledge and experience. Whether a person is using or not using, whether he/she is preparing for use, has just begun use or is highly skilled with the innovation will contribute to the relative intensity of different concerns. (p. 2)

These concerns change with time. According to researchers, it appears that individuals using an innovation go through a progression of concerns - from concerns about self to concerns about the task to concerns about impact (Hall, 1978, p. 10). This progression of concerns is shown in Figure 4 (Austrom et al., 1989, p. 45). During the first three stages, individuals have self-oriented concerns - concerns of an informational and personal nature. As use of

STAGES OF CONCERN

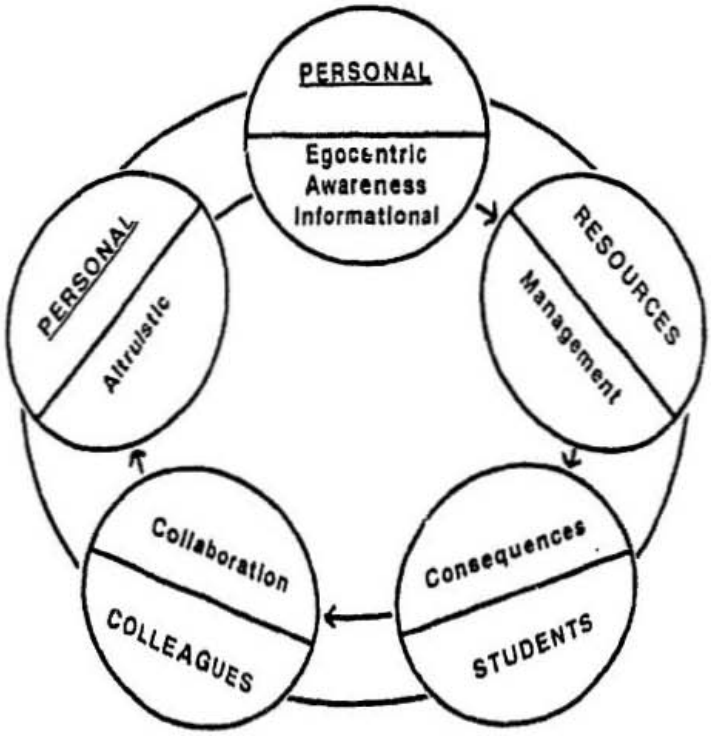

Figure 4

Austrom et al., 1989, p. 45

the innovation occurs, concerns about time, schedules and materials become of uppermost importance. Once these management concerns are resolved, concerns tend to focus on the impact of the innovations upon the learners - concerns about consequences, collaboration and refocusing (Austrom et al., 1989, p. 43). These concerns and their progression appears to be the same for all teachers (Hall & Loucks, 1978, p. 37). According to Hall and George (1979), early stage concerns must be resolved before more mature concerns can emerge (p. 19). This aspect of C-BAM identifies seven "Stages of Concern" or typical reactions to an innovation. Figure 5 (Austrom et al., 1989, pp. 41-42) lists the seven Stages of Concern, defines each stage and gives an expression of concern for each stage.

A concerns profile can be plotted for each individual showing the intensity on each of the seven Stages of Concern. This profile will show which concerns are most intense at a particular time. It should have a progressive wave motion from left to right as shown in Figure 6 (Hall et al., 1977, p. 35).

Individuals do not have concerns at only one stage. Actually, some stages show more intensity than others. Research confirms the existence of these stages and their developmental nature (Hall & Loucks, 1978, p. 40). Teachers who are nonusers of an innovation will have concerns high in Stages 0, 1 and 2. They are concerned about gaining

Stages of Concern: Typical Expressions of Concern about the Innovation

Stages of Concern	Defined	Expressions of Concern
0. Awareness	Little concern about or involvement with the innovation is indicated by the individual.	I am not concerned about it.
1. Informational	General awareness of the innovation and interest in learning more detail about it is shown. There is worry expressed about his/her relationship to the innovation. There is selfless interest in substantive aspects of the innovation, such as general characteristics, effects, and requirements for use.	I would like to know more about it.
2. Personal	Individual is uncertain about the demands of the innovation, his/her ability to meet those demands, and his/her role with the innovation. This includes analysis of his/her role in relation to the reward structure of the organization, decision-making and consideration of potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected.	How will using it affect me?
3 Management	Attention is focused on the process and tasks of using the innovation and on the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling and time demands are of utmost importance.	I seem to be spending all my time getting material ready.
4. Consequence	Attention is focused on impact of the innovation on clients/subjects in the individual's immediate sphere of influence. Focus is on relevance of the innovation for its recipients.	How is my use affecting kids?
5. Collaboration	Focus is on coordination and cooperation with others regarding the use of the innovation.	I am concerned about relating what I am doing with what other instructors are doing.
6. Refocusing	Focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. Individual has definite ideas about alternatives to the proposed or existing form of the innovation.	I have some ideas about something that would work even better.

(This figure has been compiled by combining elements from Hord, et al, 1987: 31 and Naidu, 1988: 172)

Figure 5

Austrom, et al., 1989, pp. 41-42

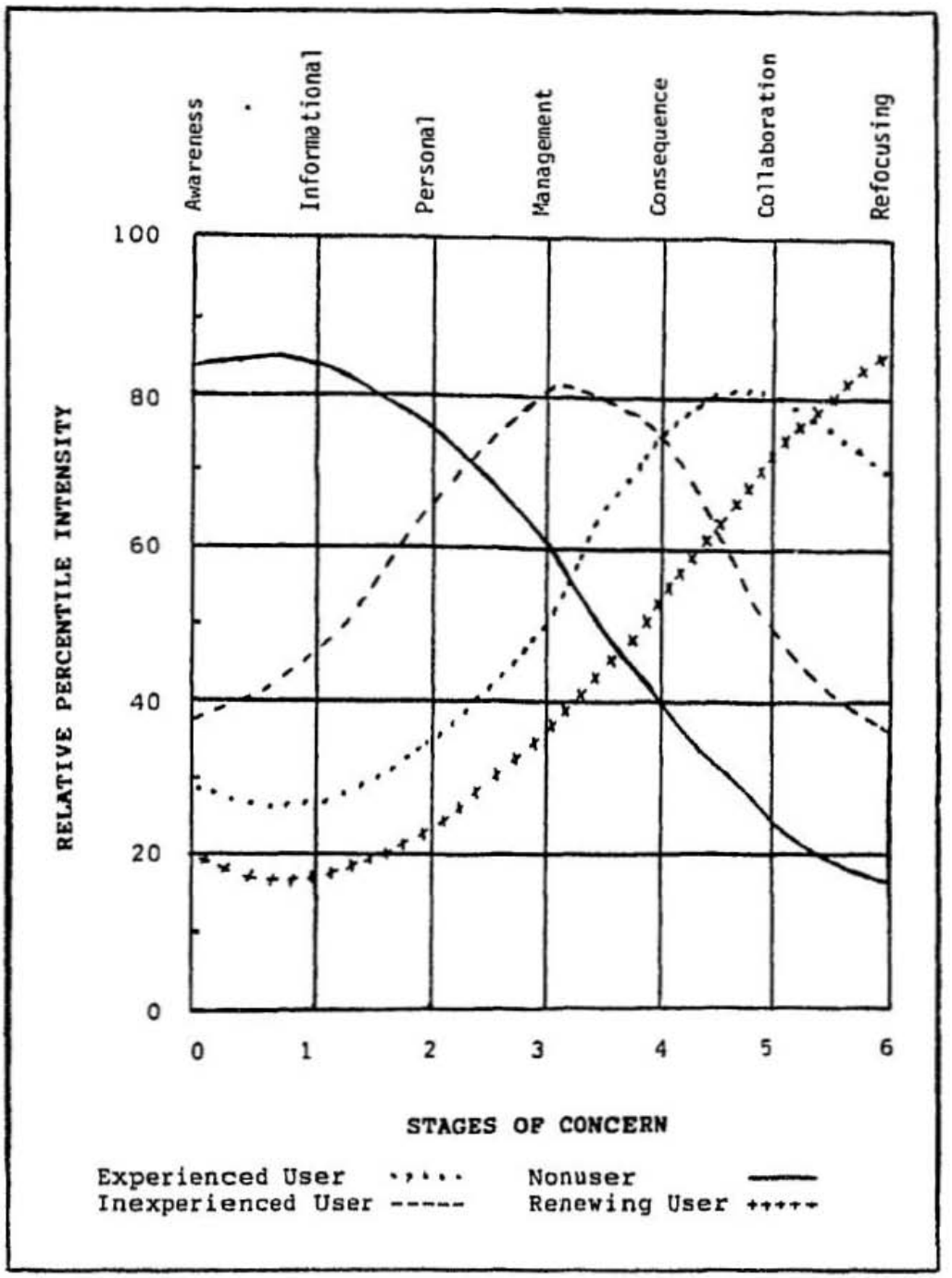

Figure 6

Hypothesized development of Stages of Concern
Hall et al., 1977, p. 35

information (Stage 1) or how using the innovation will affect them personally (Stage 2). When they begin to use the innovation (Stage 3), concerns become higher and more intense. When teachers become experienced with the innovation, the tendency is for concerns at Stages 4, 5 and 6 to become more intense with a decrease in Stages 0, 1, 2 and 3 (Hall et al., 1977, p. 10).

Assessing the Stages of Concern

The Stages of Concern Dimension can assist learning resource teachers in implementing an innovative resource-based program incorporating cooperative planning and teaching. The first step is to identify which stage of the continuum describes their own present concerns. By identifying their own Stage of Concern, learning resource teachers can better understand their own feelings, thoughts and reactions. Obviously, learning resource teachers who are involved in the implementation of resource-based learning are experiencing some concerns. Once they have assessed the stage that they are operating at, guidance in the form of suggested interventions can be made (Austrom et al., 1989, p. 43).

Once learning resource teachers are functioning at Stages 4, 5 or 6, they are well into the implementation phase of resource-based learning. At this point, it is useful to assess the Stage of Concerns of each classroom teacher. Informal discussion is an effective procedure to identify

concerns. However, the C-BAM authors caution that people often express only those feelings of great concern, although they frequently have concerns at other levels. These other concerns should not be ignored (Austrom et al., 1989, p. 47).

The most formal and precise measure of the Stages of Concern is the Stages of Concern Questionnaire (SOCQ) (Hall et al., 1977, p. 18). This is a pencil and paper instrument which is a Likert-type questionnaire that requires the respondents to react to thirty-five statements of concern by indicating how closely each statement describes a concern they have at this particular time. This measurement provides a profile for each individual showing which concerns are more intense.

The Stages of Concern Dimension provides a valuable tool for determining the perceptions and feelings of individuals, namely classroom teachers, about an innovation that they are using or about to use.

The Levels of Use Dimension

The third aspect of C-BAM, the Levels of Use Dimension, examines what the user of an innovation actually "does". Users have diverse variations in the degree of use of any innovation, just as they have differing concerns. According to Austrom et al. (1989), "these variations can be attributed to the fact that change is a process that each user

experiences personally" (p. 51). An individual may demonstrate eight different levels in this dimension as is shown in Figure 7 (Hall et al., 1975, p. 54). These levels range from the lowest level - such as lack of knowledge about the innovation - to the highest level where the user seeks to modify, improve upon and explore new developments related to the innovation. "Growth in the use of the innovation is developmental in nature" (Austrom et al., 1989, p. 51).

Learning resource teachers can apply this dimension to their own staff members by matching each Level of Use description to specific staff members and noting the teacher's name in the column provided. As mentioned in the other dimensions, the Innovation Configuration and the Stages of Concern, there are variations and differing degrees to which individuals implement an innovation. Similar variations occur within the Levels of Use component. Through informal discussion and observation, the learning resource teachers can determine at which Level of Use each classroom teacher is operating. Once this has been accomplished, they can address individual concerns and plan for effective interventions (Austrom et al., 1989, pp. 51-52).

This process of assessing and intervening must continue as teachers go through Stages of Concern. As soon as teachers resolve one level of concern, another level of concern becomes evident. This process will continue until the educational change - the implementation of resource-based

Levels of Use of the Innovation		Staff Members' Names
0	NON-USE	State in which the user has little or no knowledge of the innovation, no involvement with the innovation, and is doing nothing toward becoming involved.
I	ORIENTATION	State in which the user has recently acquired or is acquiring information about the innovation and/or has recently explored or is exploring its value and its demands upon user and user system.
II	PREPARATION	State in which the user is preparing for first use of the innovation.
III	MECHANICAL USE	State in which the user focuses most effort on the short-term day-to-day use of the innovation with little time for reflection. The user is primarily engaged in a stepwise attempt to master tasks required to use the innovation, often resulting in disjointed and superficial use.
IVa	ROUTINE	Use of the innovation is stabilized. Few, if any, changes are being made in ongoing use. Little preparation or thought is being given to improving innovation use or its consequences.
IVb	REFINEMENT	State in which the user varies the use of the innovation to increase its impact on clients within the immediate sphere of his/her influence. Variations are based on knowledge of both short and long-term consequences for clients.
V	INTEGRATION	State in which the user is combining own efforts to use the innovation with related activities of colleagues to achieve a collective impact on clients within their common sphere of influence.
VI	RENEWAL	State in which the user re-evaluates the quality of use of the innovation, seeks major modifications or alternatives to present innovation to achieve increased impact on clients, examines new developments in the field, and explores new goals for self and the user system.

Figure 7

Hall et al., 1975, p. 54

learning - becomes totally acceptable by classroom teachers.

Staff Development

"Staff development is one of the most important factors related to change in practice" (Fullan, 1982a, p. 55). The Stages of Concern concept can be used in preparation for staff development. However, this will have to be done regularly because the concerns of classroom teachers will change as they become comfortable with the innovation.

One problem associated with staff development is the lack of consideration of the teacher as an adult learner (Orlich, 1983, p. 200). In planning in-service, the learning resource teachers must be aware that educational change is "a learning experience for the adults involved" (Fullan, 1982b, p. 55). Knowles (1970) describes adult learners as human beings who:

(1) are highly self-directed;

(2) are more problem-centred than content-centre;

(3) draw heavily upon past experiences;

(4) consider the immediacy of application a high priority. (pp. 120-134)

Therefore, in planning in-service, the learning resource teacher must carefully consider these adult learner characteristics which are usually manifested as "learner concerns" (Knowles, 1970, p. 134).

Another problem associated with staff development, according to Wehmeyer (1984), is that only a minority of teachers carry out in the classroom what they learn in a workshop. However, when teachers are observed as they try to implement a particular technique and when they are provided with descriptive information that reveals their degree of success, implementation increases at a startling rate. This leads to "colleague coaching," an in-service model that "involves teachers observing one another, then providing feedback on implementation of a strategy that has been presented previously in a workshop" (p. 266). The learning resource teacher may then ask to come to the classroom to observe this new strategy. Therefore, it is imperative that classroom teachers be receptive to the idea of having their colleagues and the learning resource teacher observe their teaching.

Another factor, which may be taken as a problem, is given by Turner (1988) who alleges that a continuing program of in-service is a necessity for all educators. He gives these three reasons why in-service must be a continuing program:

(1) knowledge is expanding at an ever increasing rate;

(2) technology of instruction is expanding rapidly;

(3) skills needed in the area of information access are changing rapidly. (p. 106)

A very important factor, according to Watkins and Craft

(1988), is that the expertise of the learning resource teacher places him/her in a unique position to become "partners in progress" with the school principal to improve the resource-based program through more effective responses to the staff development needs of their faculty (p. 114).

Summary

This review has focused on literature related to educational change, specifically the C-BAM Model, and the assessment of the concerns of teachers as a means of successfully bringing about such a change. The change in this study was the implementation of resource-based learning.

The Concerns-Based Adoption Model is a model of educational change that focuses on the perspective of the individual, and provides a framework for implementing educational change. The concerns of individual teachers in relation to an innovation can be assessed with the instrument provided in the model. The information provided by this assessment can then be used to prescribe interventions, that is the appropriate in-service and staff development activities needed if change is to indeed occur.

Chapter III

THE DESIGN OF THE STUDY

Statement of Problem

Staff development is important for the successful implementation of resource-based learning. The developers of the C-BAM approach have argued that the lack of successful change within the school system has resulted from the lack of consideration of the individual in the adoption process (Hall et al., 1973, p. 8). Therefore, staff developers such as principals and learning resource teachers should plan in-service activities to meet the immediate needs of the classroom teachers. The importance of addressing the concerns of classroom teachers regarding resource-based learning prompted this study.

This study investigated the levels of concerns of classroom teachers regarding the implementation of resource-based learning. These concerns were analyzed to determine if differences existed between the concerns expressed by various sub-groups within the population. The sub-groups were stratified on the basis of gender, age, size of student population, academic qualifications, date of last university study, teaching experience, services of a full time learning resource teacher, attitude of the principal, attitude of the

learning resource teacher and attitude of the classroom teachers. Specifically, this study attempted to answer the following eleven questions:

Question 1

What are the concerns of classroom teachers regarding the implementation of resource-based learning?

Question 2

Are there statistically significant differences between male and female classroom teachers in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 3

Are there statistically significant differences between younger and older classroom teachers in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 4

Are there statistically significant differences between classroom teachers who work with various sizes of student populations in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 5

Are there statistically significant differences between classroom teachers with various academic qualifications in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 6

Are there statistically significant differences between classroom teachers who have recently completed university study in the area of education and those who have not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 7

Are there statistically significant differences between classroom teachers with various years of teaching experience in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 8

Are there statistically significant differences between classroom teachers who have the services of a full time learning resource teacher and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 9

Are there significant differences between classroom teachers who work with a principal who has a favourable attitude towards resource programs and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 10

Are there significant differences between classroom teachers who work with a learning resource teacher who has a favourable attitude towards resource programs and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Question 11

Are there significant differences between classroom teachers who have a favourable attitude towards resource programs and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Selection of Subjects

In selecting subjects for this study, it was decided to

choose a population from the grade levels in which all classroom teachers were involved in using resource-based learning as a new approach. It was also decided to choose a population within one school board in the hope that by obtaining permission from the school board and by sending out the questionnaires through the school board's delivery system, a higher response rate would be obtained. This procedure also alleviated the problem of obtaining a list of teachers and their addresses.

Population

The population for this study consisted of all elementary (grades 4-8) classroom teachers in the Roman Catholic School Board for St. John's during the school year 1991-1992. Excluded from this population were Special Education teachers. This resulted in 277 subjects who were regular classroom teachers in grades 4-8. This population came from 30 schools of various sizes of student populations.

These subjects were stratified into various sub-groups for the purpose of data analysis. The stratifications were based upon responses to a number of questions in the demographic and implementation data section of the questionnaire. Subjects were grouped on the basis of gender, age, size of student population, academic qualifications, date of last university study, teaching experience, services of a full time learning resource teacher, attitude of the

principal, attitude of the learning resource teacher and attitude of the classroom teachers.

Instrumentation

A self-administered questionnaire (Appendix A) was used to collect data to answer the eleven questions posed by this study. This survey instrument consisted of two parts:

The first part was a modified version of the Stages of Concern Questionnaire (SOCQ) (Hall et al., 1977) which was developed at the Research and Development Centre for Teacher Education at the University of Texas. The SOCQ was designed to determine the concerns of individual teachers about innovations. The validity and reliability of this instrument for assessing the concerns of teachers about educational innovations have already been verified by a number of studies (Hall et al., 1977). Therefore, there was no need to design a questionnaire to determine the concerns of teachers about a specific innovation such as resource-based learning. The SOCQ also provided an easy method of scoring the data to determine the concerns of a large number of teachers. The data collected in the SOCQ were used to determine the concerns of classroom teachers regarding the implementation of resource-based learning.

The second part of this instrument collected demographic information about the subjects as well as information about

the implementation of resource-based learning.

The remainder of this section will briefly describe the design, development and validation of the original Stages of Concern Questionnaire and its modification for this study. The validity and reliability of the original questionnaire, as well as the modified questionnaire, will also be discussed.

Stages of Concern Questionnaire

The SOCQ consists of thirty-five items. Each item contains a Likert scale (0-7) on which the subjects are to indicate their present level of concern regarding each statement about an innovation (Hall & Loucks, 1977). This questionnaire is based on the concepts of the Concerns-Based Adoption Model (C-BAM) and contains five statements for each of the seven Stages of Concern hypothesized in the model. The SOCQ was designed specially to provide an easy and quick scoring method, as well as a valid and reliable measure for assessing the Stages of Concern hypothesized in the C-BAM Model (Hall et al., 1977). It has been used to assess the concerns of teachers about many educational innovations and its wide use has verified its validity and reliability.

Modified Questionnaire

For the purpose of this study the term "innovation" was replaced with the term "resource-based learning". Similar modifications have been made in various other studies. Such

minor changes are not expected to influence the validity or the reliability of the instrument.

On the first part of the questionnaire the subjects were asked to express their concerns on the thirty-five items regarding the implementation of resource-based learning. They were asked to circle the number on a scale of 0 (not relevant) to 7 (very true of me now) to indicate their level of concern for each statement.

The second part of the questionnaire consisted of thirty-five "yes - no" items. These items were used to gather demographic information about the teachers and implementation data about the innovation - resource-based learning. These questions involved gender, age, size of student population, academic qualifications, date of last university study, teaching experience, services of a full time learning resource teacher, attitude of the principal, attitude of the learning resource teacher and attitude of the classroom teachers.

Validity and Reliability

It was not necessary to consider the validity and reliability of the second part of the questionnaire since it collected only factual information. The remainder of this section will now focus on the first part of the questionnaire and its validity and reliability.

As mentioned earlier, the original SOCQ was used in

various studies to assess concerns about innovations and as a result, these studies have verified its validity and reliability.

The assessment of the validity of the SOCQ was somewhat difficult since no other questionnaire was available to compare with the SOCQ (Hall et al., 1977). However, inter-correlation matrices, judgements of concerns based on interview data and the confirmation of expected group differences were used to assess the validity of the SOCQ (Hall et al., 1977). These verified that the SOCQ measured seven separate constructs known as the Stages of Concern (Hall & George, 1979).

The various studies have shown the original SOCQ to have a high internal reliability with alpha coefficients for the seven stages ranging from .64 to .83 with six of the seven above .70 (Hall et al., 1977). The test-retest reliability over a two week interval was also found to be acceptable. Correlation ranges from .65 to .85 for the seven stages with four of the seven being above .80 (Hall et al., 1977).

As stated earlier, because of the use of the original SOCQ in assessing many educational innovations, its modification for this study is not expected to influence its validity and reliability.

Administration of Questionnaire

The modified questionnaire was administered during the

month of January, 1992. The population sample involved thirty schools of the Roman Catholic School Board for St. John's and consisted of 277 elementary classroom teachers.

During the first week of January a letter, explaining the purpose of the study to the principals, was delivered to the school board office and placed in the various mail boxes. Attached to this letter was a copy of the school board's permission to do such a study (Appendix B). The following week the packages of questionnaires for the thirty schools were delivered to the school board office and placed in the various mail boxes. Each package contained a large pre-stamped, self-addressed envelope for the return of the completed questionnaires.

The principals of the thirty schools were asked to distribute the questionnaires and their individual return envelopes to the classroom teachers in grades four to eight. They were also asked to collect the completed questionnaires at the end of a one week period. The completed questionnaires were to be returned in the large pre-stamped, self-addressed envelope. The middle of February was given as the deadline for the return of the completed questionnaires.

The modified questionnaire had an attached letter which explained to the teachers the purpose of the study and the time limit of one week to complete the questionnaire (Appendix A). Teachers were asked to complete the questionnaire, seal it in the envelope provided and then

return it to the principal. Teachers were also asked to complete the questionnaires individually and not as a group. This request was made to ensure that the responses on each questionnaire would represent the individual teacher's concerns and not the collective concerns of a group of teachers.

By the middle of February responses had been received from twenty-five of the thirty schools. The principals of the five remaining schools were contacted by telephone the following week requesting the return of the questionnaires. As a result of the telephone calls responses were received from three more schools. The response rate was 52.3 percent which will influence the conclusions and the ability to generalize the results. The data collected from these teachers will be used to answer the questions posed by this study.

Treatment of Data

Scoring of the Data

This study collected two kinds of data: (1) descriptive data relating to the demographic characteristics of the subjects and the implementation factors of the innovative process and (2) intensity scores on the thirty-five items of concern. The descriptive data collected on the second part of the questionnaire will be used in its raw form to stratify

the subjects into various sub-groups.

Before describing the analysis procedure to be used on the first part of the questionnaire, the focus will now be on the interpretation of the raw data of this section. For each teacher, the score for each statement will be the number circled (0-7) in that statement. Then, for each of the seven Stages of Concern, a raw intensity score will be computed by totalling the score for each of the five statements related to that stage (see Appendix C for a list of the statements by Stage of Concern). For each of the seven Stages of Concern a group mean raw score will be obtained from the individual raw scores.

The mean raw scores for each of the seven Stages of Concern will then be converted to percentile scores by using the conversion chart as outlined by Hall et al., (1977) in their scoring manual (See Appendix D). Percentiles will be calculated for each subject in each of the seven Stages of Concern. Sub-group mean raw scores will also be obtained for each of the seven Stages of Concern. Then the sub-group mean raw scores will be converted to percentile mean scores. Group mean percentile scores will be calculated for each Stage of Concern.

Profiles which show the intensity of concerns for each stage can be constructed by graphing the percentile score for each stage. Profiles will be constructed by using the group percentile mean scores and the percentile mean score for each

sub-group as stratified for the eleven questions in this study.

The percentile scores for each subject will be used to find his/her "peak" score. The "peak" score is the stage showing the highest percentile intensity score.

The above data will then be used with the descriptive data from the second part of the questionnaire to find the answers to the eleven questions posed in this study.

Analysis Procedures Used

This study will attempt to answer eleven questions related to the intensity of concerns expressed by elementary classroom teachers regarding the implementation of resource-based learning. These questions, together with the statistical analysis used to test them, will be given below.

Question 1

What are the concerns of classroom teachers regarding the implementation of resource-based learning?

The first question was answered by tabulating the number of teachers having each Stage of Concern as the "peak" score. A table was constructed to show the number of teachers and the percentage of subjects with each stage as the "peak" score.

Besides totalling the "peak" scores, a profile was constructed to show the group mean percentile scores. This

showed the relative intensity for each Stage of Concern for all elementary classroom teachers.

Question 2

Are there statistically significant differences between male and female classroom teachers in the intensity of concerns in each of the Stages of Concern regarding the implemenation of resource-based learning?

The population for this study was stratified into two groups - males and females.

The second question was answered by conducting a t-test on the differences of the mean raw scores of males and females. A separate test was conducted for each of the seven stages. These tests were judged at the .05 level of significance.

To illustrate differences and similarities in the intensity of concerns of these two groups, profiles were plotted for both groups on the same grid.

Question 3

Are there statistically significant differences between younger and older classroom teachers in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into four sub-groups. A question on the second part of the

questionnaire delineated the respondents into these four groups.

The third question was answered using a oneway analysis of variance for independent samples. The results of these tests were judged at the .05 level of significance. A multiple range test was done by using the Student-Newman and Keuls procedure.

To illustrate differences and similarities, a profile for each subgroup was plotted on the same grid.

Question 4

Are there statistically significant differences between classroom teachers who work with various sizes of student populations in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into five sub-groups. A question on the second part of the questionnaire delineated the respondents into these five groups.

The fourth question was answered using a oneway analysis of variance for independent samples. The results of these tests were judged at the .05 level of significance. A multiple range test was conducted by using the Student-Newman and Keuls procedure.

A profile for each of these five groups was displayed on

the same grid to point out similarities and differences.

Question 5

Are there statistically significant differences between classroom teachers with various academic qualifications in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into four sub-groups. A question on the second part of the questionnaire delineated the respondents into these four groups.

The fifth question was answered using a oneway analysis of variance for independent samples. The results of these tests were judged at the .05 level of significance. A multiple range test was conducted by using the Student-Newman and Keuls procedure.

To illustrate differences and similarities, a profile for each of the four sub-groups was plotted on the same grid.

Question 6

Are there statistically significant differences between classroom teachers who have recently completed university study in the area of education and those who have not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into four

sub-groups. A question on the second part of the questionnaire delineated the respondents into these four groups.

The sixth question was answered using a oneway analysis of variance for independent samples. The results of these tests were judged at the .05 level of significance. A multiple range test was conducted by using the Student-Newman and Keuls procedure.

A profile for each of the four sub-groups was plotted on the same grid to show similarities and differences.

Question 7

Are there statistically significant differences between classroom teachers with various years of teaching experience in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into seven sub-groups. A question on the second part of the questionnaire delineated the respondents into these seven groups.

The seventh question was answered by using a oneway analysis of variance for independent samples. The results of these tests were judged at the .05 level of significance. A multiple range test was conducted by using the Student-Newman and Keuls procedure.

A profile for each of the sub-groups was plotted on the

same grid to illustrate similarities and differences.

Question 8

Are there statistically significant differences between classroom teachers who have the services of a full time learning resource teacher and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into two groups based on full time or part time services of a learning resource teacher. A question on the second part of the questionnaire delineated the respondents into these two groups.

The eighth question was answered by conducting a t-test on the difference of the mean raw scores of the respondents who have the services of a full time learning resource teacher and those who do not. A separate test was conducted for each of the seven stages. The results of these tests were judged at the .05 level of significance.

Profiles for the two sub-groups were plotted on the same grid to illustrate differences and similarities.

Question 9

Are there significant differences between classroom teachers who work with a principal who has a favourable attitude towards learning resource programs and those who do

not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into five sub-groups based on "how favourable" their principal's attitude was towards learning resource programs.

The following criteria were used to define a principal with a favourable attitude towards learning resource programs:

(1) does not use the learning resource centre as a classroom;

(2) does not give classroom teachers a regular scheduled period in the learning resource centre;

(3) ensures that classroom teachers stay with their students when they are working in the learning resource centre;

(4) visits the classroom to observe students while they are working on resource-based units;

(5) ensures that each teacher's schedule allows for preparation time to meet with the learning resource teacher;

(6) tries to recruit adult volunteer to help classroom teachers and students in the learning resource centre;

(7) ensures that a resource-based learning committee exists in the school.

A frequency distribution delineated the population into the following five sub-groups:

(1) classroom teachers whose principal met all seven criteria items;

(2) classroom teachers whose principal met six criteria items;

(3) classroom teachers whose principal met five criteria items;

(4) classroom teachers whose principal met four criteria items;

(5) classroom teachers whose principal met three or less criteria items.

Profiles for these five sub-groups were plotted on the same grid to illustrate similarities and differences.

Question 10

Are there significant differences between classroom teachers who work with a learning resource teacher who has a favourable attitude towards learning resource programs and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into six sub-groups based on "how favourable" their learning resource teacher's attitude was towards learning resource programs.

The following criteria were used to define a learning

resource teacher with a favourable attitude towards learning resource programs:

(1) allows individuals or small groups into the learning resource centre as the need arises to do immediate research;

(2) meets individually with classroom teachers to cooperatively plan units;

(3) when planning a unit of work, refers to the school's learning skills plan to determine which skills should be introduced or reinforced;

(4) when planning a unit of work with classroom teachers, revises and adapts units from previous years rather than always starting from scratch;

(5) asks classroom teachers to help in selecting new materials for the learning resource centre;

(6) ensures that students do not have any difficulty obtaining and returning recreational reading materials;

(7) visits classrooms to observe students working on resource-based units;

(8) informs classroom teachers of the arrival of new materials;

(9) seeks information from classroom teachers concerning courses and methods;

(10) helps the principal recruit adult volunteers to assist classroom teachers and students in the

learning resource centre;

(11) helps the principal to set up a resource-based learning committee.

A frequency distribution delineated the population into the following six sub-groups:

(1) classroom teachers whose learning resource teacher met all eleven criteria items;

(2) classroom teachers whose learning resource teacher met ten criteria items;

(3) classroom teachers whose learning resource teacher met nine criteria items;

(4) classroom teachers whose learning resource teacher met eight criteria items;

(5) classroom teachers whose learning resource teacher met seven criteria items;

(6) classroom teachers whose learning resource teacher met six or less criteria items.

Profiles for these six sub-groups were plotted on the same grid to illustrate similarities and differences.

Question 11

Are there significant differences between the attitudes of classroom teachers towards learning resource programs and the intensity of their concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The population for this study was stratified into six sub-groups based on "how favourable" their attitude was towards learning resource programs.

The following criteria were used to define a classroom teacher with a favourable attitude towards learning resource programs:

(1) attends in-service programs that are conducted by the learning resource teacher;

(2) feels comfortable in using equipment in the learning resource centre;

(3) would like to have more in-service programs to help deal with new technology;

(4) invites the learning resource teacher to visit their classroom while their students are working on resource-based units;

(5) invites the principal to visit their classroom while their students are working on resource-based units;

(6) serves on the resource-based learning committee;

(7) is familiar with the learning resource centre;

(8) has a clear understanding of the role of the learning resource teacher and the function of the learning resource centre.

A frequency distribution delineated the population into the following six sub-groups:

(1) classroom teachers who met all eight criteria items;

(2) classroom teachers who met seven criteria items;

(3) classroom teachers who met six criteria items;

(4) classroom teachers who met five criteria items;

(5) classroom teachers who met four criteria items;

(6) classroom teachers who met three or less criteria items.

Profiles for these six sub-groups were plotted on the same grid to illustrate similarities and differences.

Summary

This chapter has described the design of a study conducted to determine the concerns of the elementary classroom teachers of the Roman Catholic School Board for St. John's regarding the implementation of resource-based learning. The questions posed in this study have been listed as well as the statistical analysis used to answer them. A description of the population and the procedure for selecting the subjects have been given. The instrument used, its administration and its validity and reliability have been described. Also, a description of the procedures used to determine teacher concerns has been given.

The data collected from this study were used to answer the questions posed in this chapter. The next chapter will describe the results of the statistical analysis of this data.

Chapter IV

THE RESULTS OF THE INVESTIGATION

This study was undertaken to investigate the concerns of classroom teachers regarding the implementation of resource-based learning and to investigate some factors that may influence the level of intensity of these concerns. Specifically, it sought to answer eleven questions which were listed in Chapter III.

The population for this study was the classroom teachers in grades 4-8 in the Roman Catholic School Board for St. John's in the school year 1991-92. The subjects were stratified into several sub-groups to determine if certain factors influenced these concerns. These stratifications were identified in Chapter III in the description of the analysis used for each question. This chapter will present the results of the study on a question-by-question basis.

Question 1

What are the concerns of classroom teachers regarding the implementation of resource-based learning?

This question was posed to ascertain the feelings of classroom teachers regarding their use of resource-based

learning.

The administration of a modified version of the Stages of Concern Questionnaire (SOCQ) provided the data to answer this question.

The data collected on the thirty-five statements of concern provided a raw score for each individual on each of the seven Stages of Concern. The raw scores were found by adding the levels of concern expressed on the five items related to each Stage of Concern (See Appendix C for a listing of concern statements by Stage of Concern). The raw scores were then converted to percentile scores by using the conversion chart (Appendix D) outlined by Hall et al., (1977) in their scoring manual.

The percentile for each classroom teacher on each of the seven stages was used to determine the individual's "peak" score - the score which had the highest relative intensity of the seven. A tally of the "peak" scores for all 145 teachers is presented in Table 1.

The results indicate that the majority of classroom teachers expressed concern related to self (awareness, informational, personal and management). At the Awareness level (Stage 0), 21.4 percent of the teachers expressed their most intense concerns. This was followed closely by the Informational level (Stage 1) with 20.7 percent of the teachers expressing intense concerns. At the Personal level

Table 1

"Peak" concerns of classroom teachers regarding the implementation of resource-based learning.

Stages of Concern	Number of Teachers	Percentage of Respondents
Stage 0 Awareness	31	21.4
Stage 1 Informational	30	20.7
Stage 2 Personal	32	22.1
Stage 3 Management	28	19.3
Stage 4 Consequence	5	3.4
Stage 5 Collaboration	9	6.2
Stage 6 Refocusing	10	6.9
Total	145	100.0

(Stage 2), 22.1 percent of the teachers expressed their most intense concerns. These teachers are much more concerned about their personal position and well being in relation to the change than they are interested in learning more of a substantive nature about the innovation. This was followed by the Management level (Stage 3) with 19.3 percent of the teachers expressing intense concerns. A high Stage 3 indicates that the teachers have logistics, time and management concerns. It was on the first four Stages (Awareness, Informational, Personal and Management) that 83.5 percent of the classroom teachers have their most intense concerns about the implementation of using resource-based learning.

The group raw mean score on each level of concern was converted to percentiles to determine the relative intensity for each stage. The percentile ranking of the mean score for each stage was displayed graphically as a profile and is shown in Figure 8. This profile confirms that the first four stages of concern are most intense for the classroom teachers responding. This profile is a typical nonuser SOCQ profile. Nonusers are normally highest on Stages 0, 1, 2 and 3 and lowest on Stages

4, 5 and 6.

The preceding analysis would seem to indicate that the majority of classroom teachers have their most intense concerns at either the Awareness, Informational, Personal or Management levels. Their concerns have been aroused and need

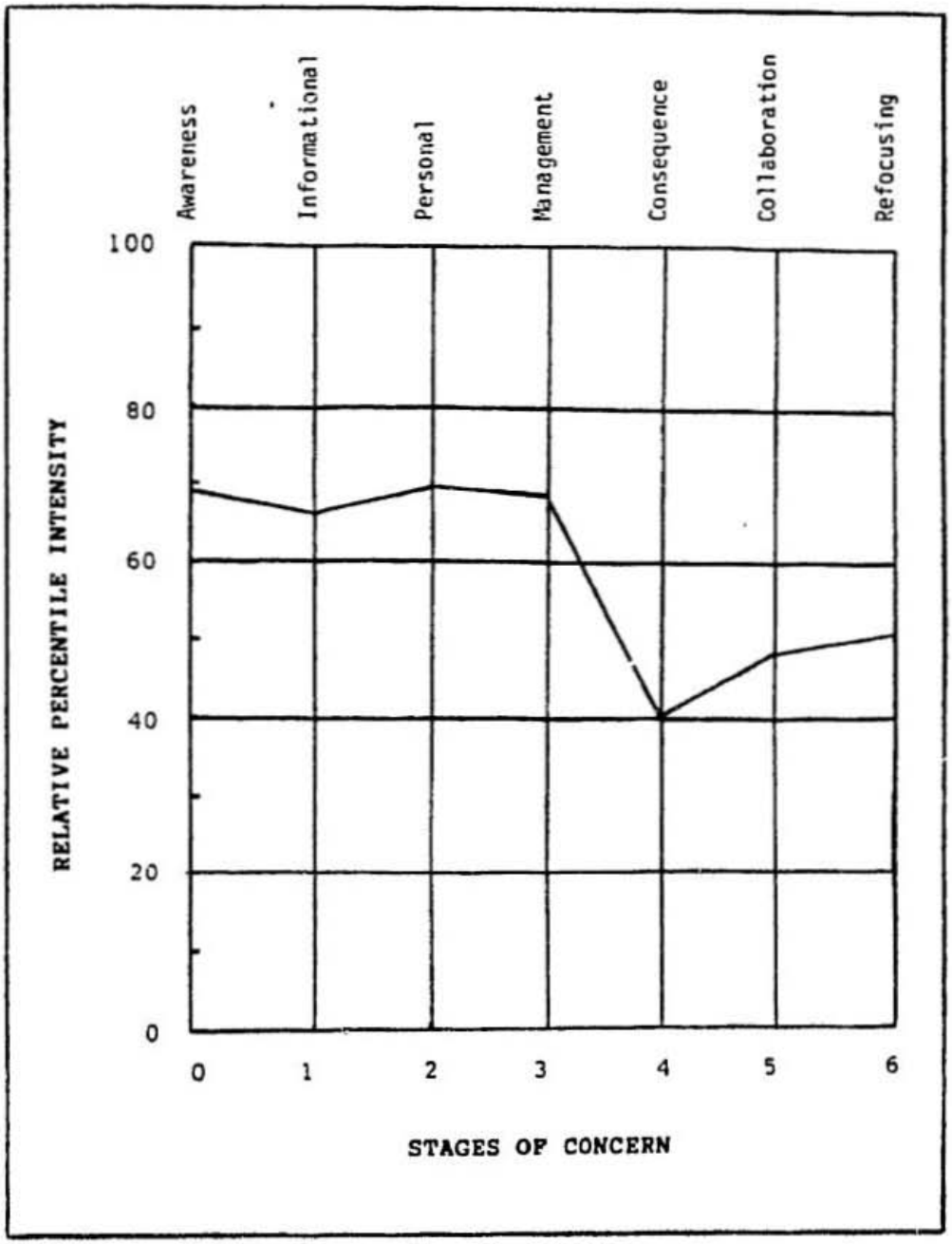

Figure 8

Percentile mean scores of the concerns of teachers regarding the implementation of resource-based learning.

to be resolved before other concern levels can become more intense.

Principals and learning resource teachers can assist classroom teachers by addressing their immediate concerns in future staff development activities.

Question 2

Are there statistically significant differences between male and female classroom teachers in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

The question was answered using a series of t-tests for independent samples. A separate test was conducted on the sub-group means for the seven Stages of Concern. The results of these tests were judged at the .05 level of significance. The results of these tests are summarized in Table 2.

The results of these tests indicate that at the .05 level of significance there were no statistically significant differences, based on gender, found in the means scores at any of the stages. However, the profiles (Figure 9) show that the concerns of male teachers are slightyly higher at Stage 1 (Informational level), and Stage 5 (Collaboration level).

Table 2

Results of t-tests on intensity of concerns of male and female classroom teachers

Stage	Group	N	Mean	Std. Dev.	t-value	2-Tail Prob.
0	Male	52	7.44	5.55	-.35	.728
	Female	88	7.76	5.05		
1	Male	52	19.13	7.12	.86	.393
	Female	88	17.86	9.19		
2	Male	52	19.40	8.15	.18	.854
	Female	89	19.12	9.05		
3	Male	53	17.51	6.82	-.55	.583
	Female	91	18.61	6.93		
4	Male	52	22.46	6.26	.14	.892
	Female	88	22.32	5.87		
5	Male	47	20.64	6.55	.48	.692
	Female	87	20.08	6.27		
6	Male	49	16.55	6.55	-.25	.802
	Female	84	16.85	6.51		

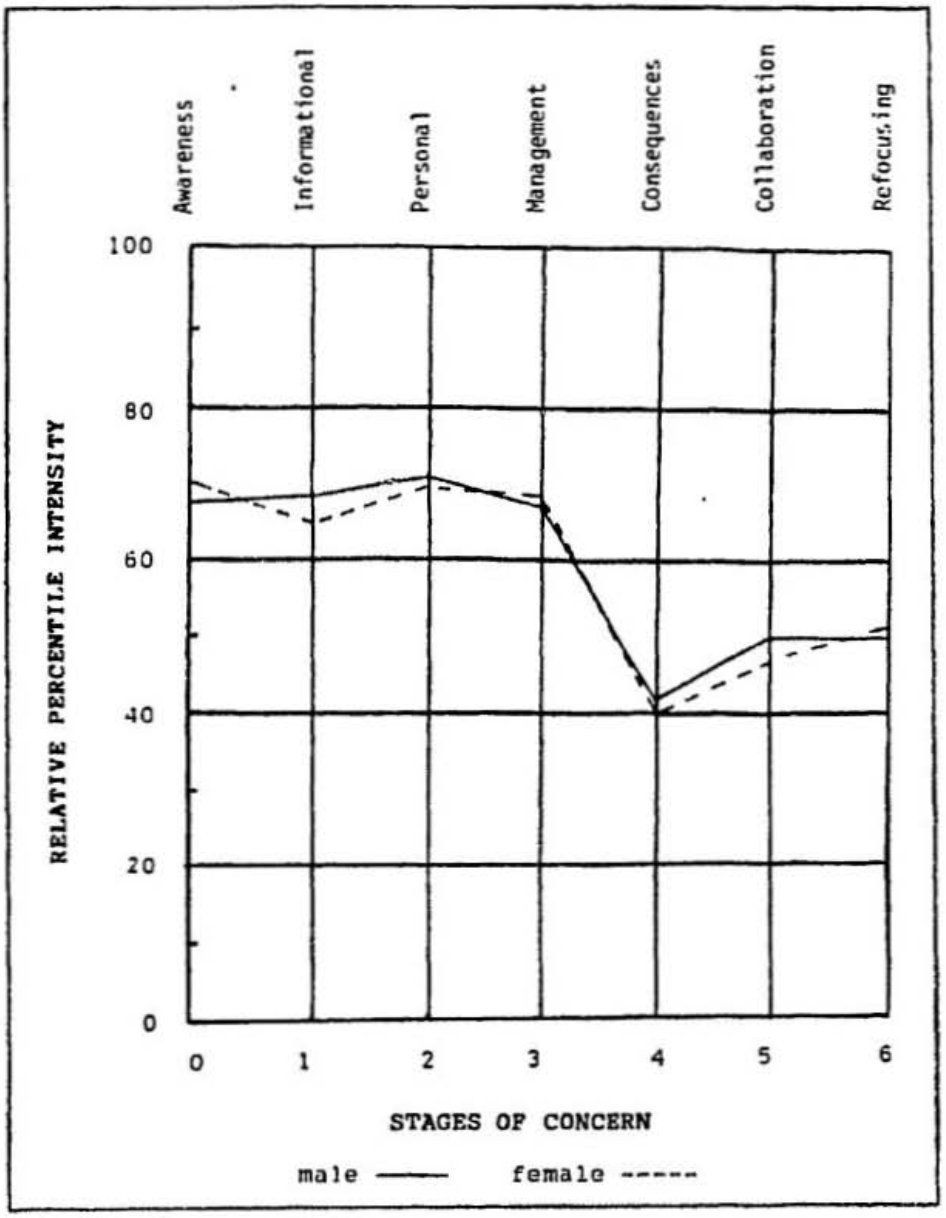

Figure 9

Percentile mean scores of the concerns of male and female teachers regarding the implementation of resource-based learning.

Question 3

Are there statistically significant differences between younger and older classroom teachers in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Teachers were asked to indicate their age. A question on the second part of the questionnaire delineated the classroom teachers into four sub-groups.

The question was answered using a oneway analysis of variance for independent samples. The results were judged at the .05 level of significance. A multiple range test was conducted using the Student-Newman and Keuls procedure. The results of these tests are given in Table 3.

The results of these tests indicate that there were differences in the mean scores between the age groups but these differences were not statistically significant. The sub-group profiles (Figure 10) indicate that at all seven stages, the youngest age group expressed the highest levels of concern.

Question 4

Are there statistically significant differences between classroom teachers who work in various sizes of student populations in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Table 3

Results of oneway analysis of variance on intensity of concerns of classroom teachers of different age groups

Stage	Group	N	Mean	D.F.	F. Ratio	F. Prob.
0	0-29	13	8.31	Between Groups	1.1254	.3411
	30-39	39	8.05	3		
	40-49	81	7.63	Within Groups		
	50+	8	4.50	137		
1	0-29	13	21.38	Between Groups	1.7329	.1631
	30-39	41	18.39	3		
	40-49	80	18.34	Within Groups		
	50+	7	12.43	137		
2	0-29	13	23.08	Between Groups	2.1935	.0916
	30-39	41	18.95	3		
	40-49	80	19.38	Within Groups		
	50+	8	13.25	138		
3	0-29	13	20.54	Between Groups	1.0071	.3916
	30-39	42	17.21	3		
	40-49	82	18.09	Within Groups		
	50+	8	16.00	141		
4	0-29	12	26.58	Between Groups	2,3242	.0777
	30-39	42	21.76	3		
	40-49	80	22.29	Within Groups		
	50+	7	20.86	137		
5	0-29	12	21.67	Between Groups	1.7820	.1537
	30-39	40	19.90	3		
	40-49	76	20.76	Within Groups		
	50+	7	15.43	131		
6	0-29	12	19.08	Between Groups	1.0235	.3845
	30-39	39	17.41	3		
	40-49	76	16.12	Within Groups		
	50+	7	15.29	130		

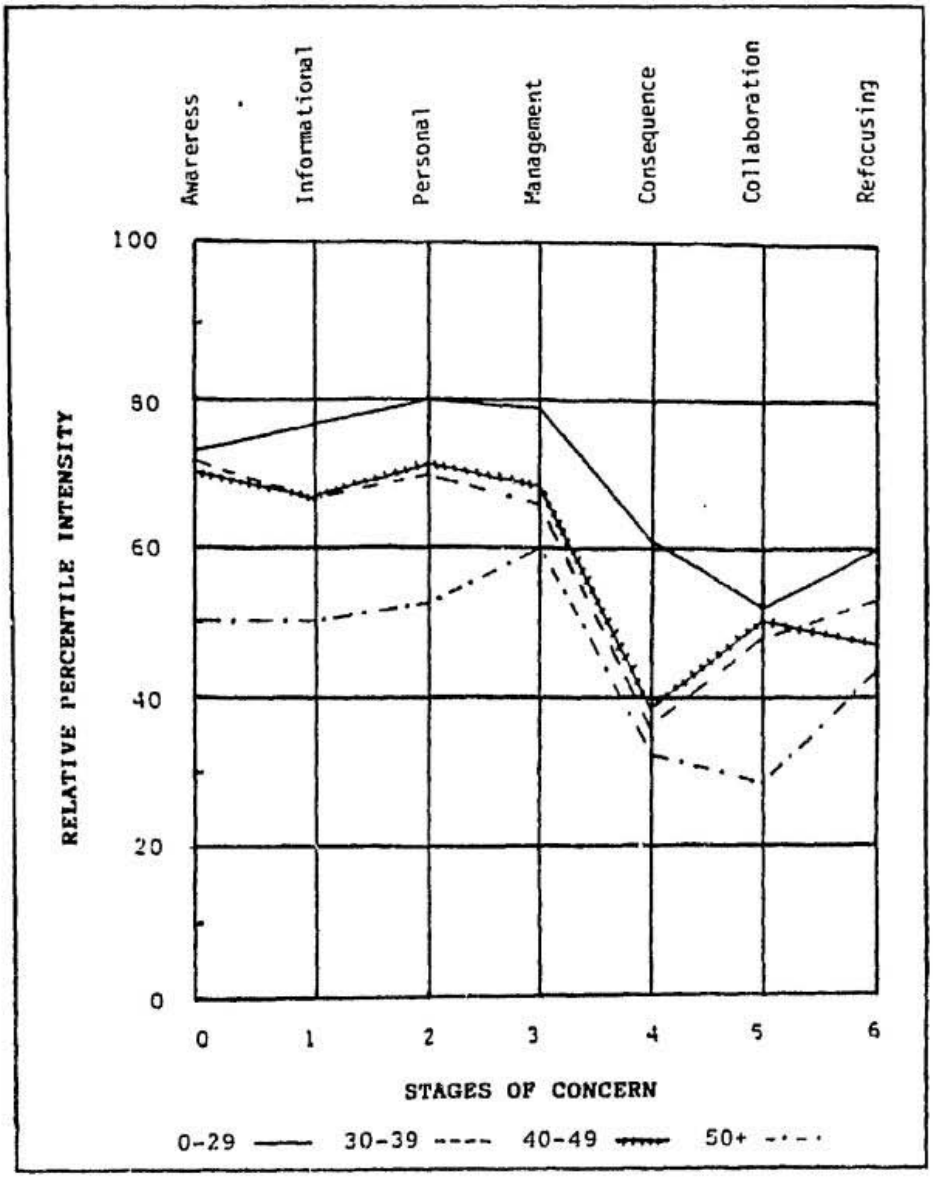

Figure 10

Percentile mean scores of the concerns of teachers of different age groups regarding the implementation of resource-based learning.

Teachers were asked to indicate the student population of their schools. A question on the second part of the questionnaire delineated the classroom teachers into five sub-groups.

The question was answered using a oneway analysis of variance for independent samples. The results were judged at the .05 level of significance. A multiple range test was conducted by using the Student-Newman and Keuls procedure.

Although there were no statistically significant differences found (Table 4), the profiles (Figure 11) illustrate that teachers working in schools with the lowest student population (100-199) expressed their most intense concerns Stage 2 (Personal level) and Stage 3 (Management level). At the Management level, this group expressed an intensity of concerns 23 per cent higher than that expressed by teachers working in schools with a student population of 300-399.

Question 5

Are there statistically significant differences between classroom teachers with various academic qualifications in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Teachers were asked to indicate their academic qualifications. A question on the second part of the

Table 4

Results of oneway analysis of variance on intensity of concerns of classroom teachers in various sizes of student populations

Stage	Group	N	Mean	D.F.	F. Ratio	F. Prob.
0	100-199	7	7.29	Between Groups	.2529	.9075
	200-299	32	7.78	4		
	300-399	22	8.18			
	400-499	21	6.67	Within Groups		
	500+	57	7.74	134		
1	100-199	7	18.43	Between Groups	.7209	.5791
	200-299	31	20.35	4		
	300-399	21	16.86			
	400-499	21	17.00	Within Groups		
	500+			134		
2	100-199	7	20.86	Between Groups	.4658	.7607
	200-299	31	19.61	4		
	300-399	21	17.43			
	400-499	22	17.95	Within Groups		
	500+	59	19.76	135		
3	100-199	7	21.57	Between Groups	1.8825	.1169
	200-299	32	19.81	4		
	300-399	22	15.55			
	400-499	22	17.32	Within Groups		
	500+	60	17.53	138		
4	100-199	7	24.14	Between Groups	.3984	.8095
	200-299	31	22.77	4		
	300-399	21	21.19			
	400-499	21	22.05	Within Groups		
	500+	59	22.42	134		
5	100-199	7	18.86	Between Groups	1.3626	.2506
	200-299	31	20.45	4		
	300-399	20	22.95			
	400-499	19	18.53	Within Groups		
	500+	56	20.09	128		
6	100-199	7	20.14	Between Groups	1.2656	.2870
	200-299	30	15.33	4		
	300-399	20	15.40			
	400-499	19	18.00	Within Groups		
	500+	56	17.11	127		

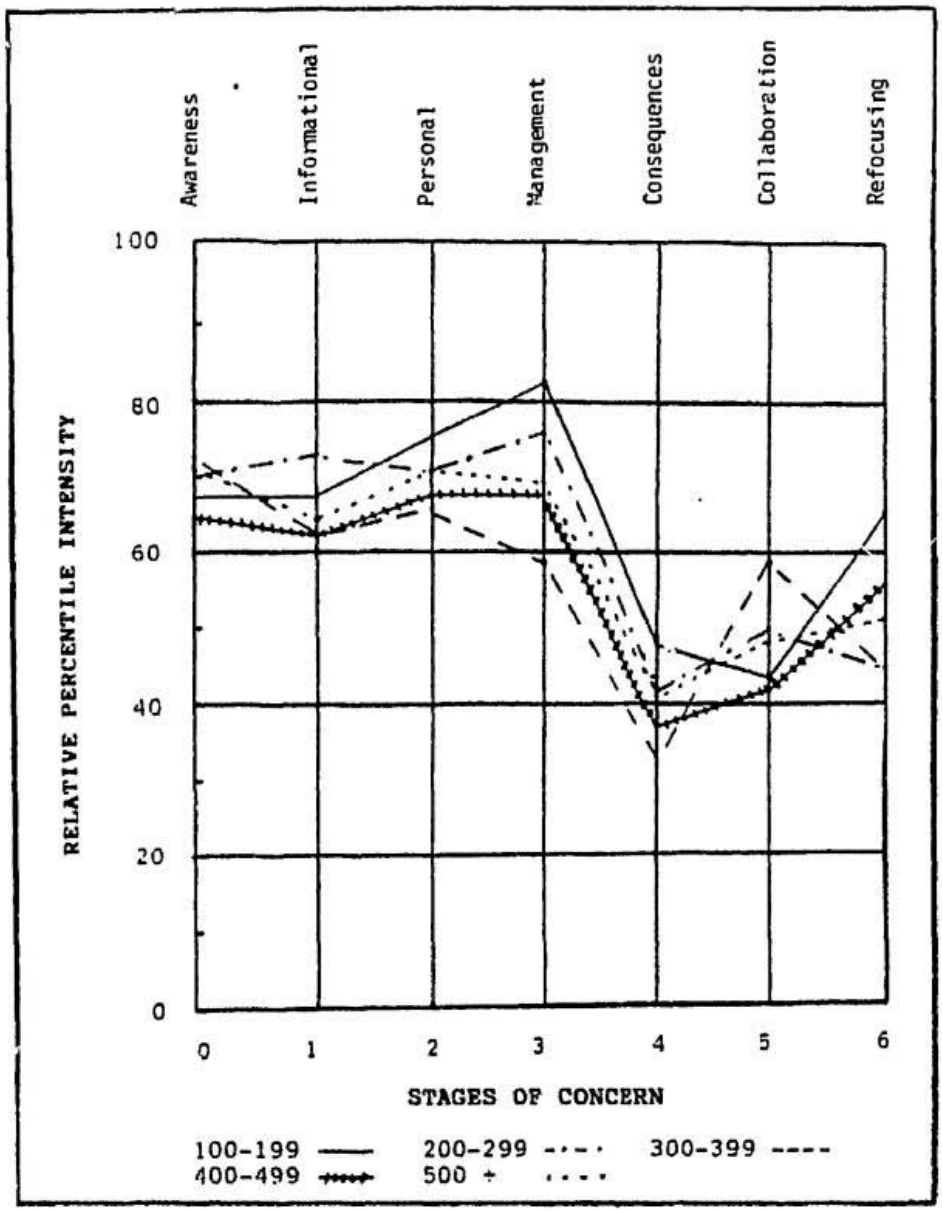

Figure 11

Percentile mean scores of the concerns of teachers who work with various sizes of student populations regarding the implementation of resource-based learning

questionnaire delineated the classroom teachers into four sub-groups.

A oneway analysis of variance was done for independent samples. The results were judged at the .05 level of significance. A multiple range test was conducted by using the Student-Newman and Keuls procedure.

There was a statistically significant difference in the mean scores on Stage 0 (Awareness level) according to the level of academic achievement. Teachers with a doctorate degree had statistically significant higher mean Stage 0 scores than the other teachers (Table 5). The level of academic achievement did not significantly influence the scores on any of the other stages. This is also illustrated in the profile (Figure 12).

Question 6

Are there statistically significant differences between classroom teachers who have recently completed university study in the area of education and those who have not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Teachers were asked to indicate if they had recently completed university study in the area of education. A question on the second part of the questionnaire delineated the classroom teachers into four sub-groups.

Table 5

Results of oneway analysis of variance on intensity of concerns of classroom teachers with various academic qualifications

Stage	Group	N	Mean	D.F.	F. Ratio	F. Prob.
0	No Degree	3	3.67	Between Groups	3.8810	.0106
	Bachelors	108	7.89	3		
	Masters	23	5.48	Within Groups		
	Doctorate	5	12.80	134		
1	No Degree	3	13.67	Between Groups	.9217	.4322
	Bachelors	111	18.33	3		
	Masters	20	17.75	Within Groups		
	Doctorate	5	23.40	135		
2	No Degree	3	12.00	Between Groups	1.8224	.1460
	Bachelors	111	19.89	3		
	Masters	21	16.14	Within Groups		
	Doctorate	5	19.40	136		
3	No Degree	3	12.33	Between Groups	1.6370	.1836
	Bachelors	111	18.42	3		
	Masters	24	15.83	Within Groups		
	Doctorate	5	18.60	139		
4	No Degree	3	16.67	Between Groups	1.0837	.3583
	Bachelors	107	22.29	3		
	Masters	24	22.83	Within Groups		
	Doctorate	5	24.00	135		
5	No Degree	2	19.00	Between Groups	.7449	.5272
	Bachelors	105	20.08	3		
	Masters	22	19.95	Within Groups		
	Doctorate	4	24.75	129		
6	No Degree	3	12.67	Between Groups	1.3573	.2589
	Bachelors	104	16.71	3		
	Masters	21	16.05	Within Groups		
	Doctorate	4	22.00	128		

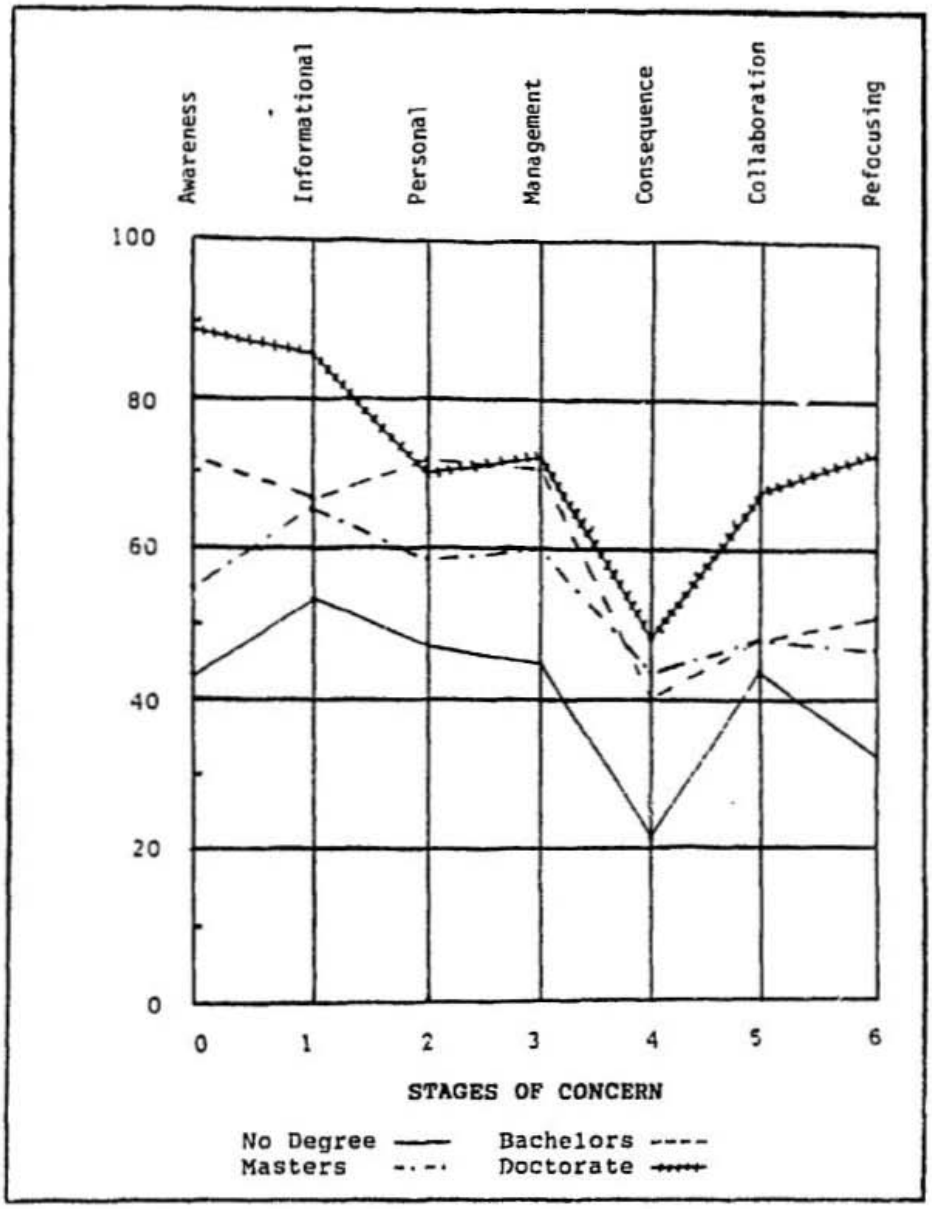

Figure 12

Percentile mean scores of the concerns of teachers with various academic qualifications regarding the implementation of resource-based learning

The question was answered by doing a oneway analysis of variance for independent samples. The results were judged at the .05 level of significance. A multiple range test was conducted using the Student-Newman and Keuls procedure.

Although there were no statistically significant differences (Table 6), the results do indicate a practical difference. The profiles (Figure 13) show that teachers who completed university study in the area of education during the years 1988-91 expressed the most intense concerns at Stage 3 (Management level).

Question 7

Are there statistically significant differences between classroom teachers with various years of teaching experience in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Teachers were asked to indicate their years of teaching experience. A question on the second part of the questionnaire delineated the teachers into seven sub-groups.

A oneway analysis of variance was done for independent samples. The results were judged at the .05 level of significance. A multiple range test was conducted by using the Student-Newman and Keuls procedure. The results of these tests are summarized in Table 7.

Table 6

Results of oneway analysis of variance on intensity of concerns of classroom teachers who have recently completed university study in the area of education and those who have not

Stage	Group	N	Mean	D.F.	F. Ratio	F. Prob.
0	Pre-1980	33	8.06	Between Groups	.8715	.4577
	1980-83	26	7.54	3		
	1984-87	34	6.38	Within Groups		
	1988-91	46	8.13	135		
1	Pre-1980	33	18.73	Between Groups	.3174	.8128
	1980-83	26	17.62	3		
	1984-87	34	17.47	Within Groups		
	1988-91	46	19.09	135		
2	Pre-1980	33	19.06	Between Groups	.0641	.9787
	1980-83	26	19.69	3		
	1984-87	34	18.71	Within Groups		
	1988-91	47	19.21	136		
3	Pre-1980	34	17.97	Between Groups	1.0286	.3820
	1980-83	26	17.35	3		
	1984-87	35	16.49	Within Groups		
	1988-91	48	19.08	139		
4	Pre-1980	33	21.39	Between Groups	1.2580	.2914
	1980-83	25	20.92	3		
	1984-87	35	23.37	Within Groups		
	1988-91	46	22.96	135		
5	Pre-1980	32	19.34	Between Groups	.7092	.5482
	1980-83	22	19.09	3		
	1984-87	34	20.59	Within Groups		
	1988-91	45	21.00	129		
6	Pre-1980	30	15.97	Between Groups	.6227	.6016
	1980-83	23	15.48	3		
	1984-87	34	17.44	Within Groups		
	1988-91	45	17.18	128		

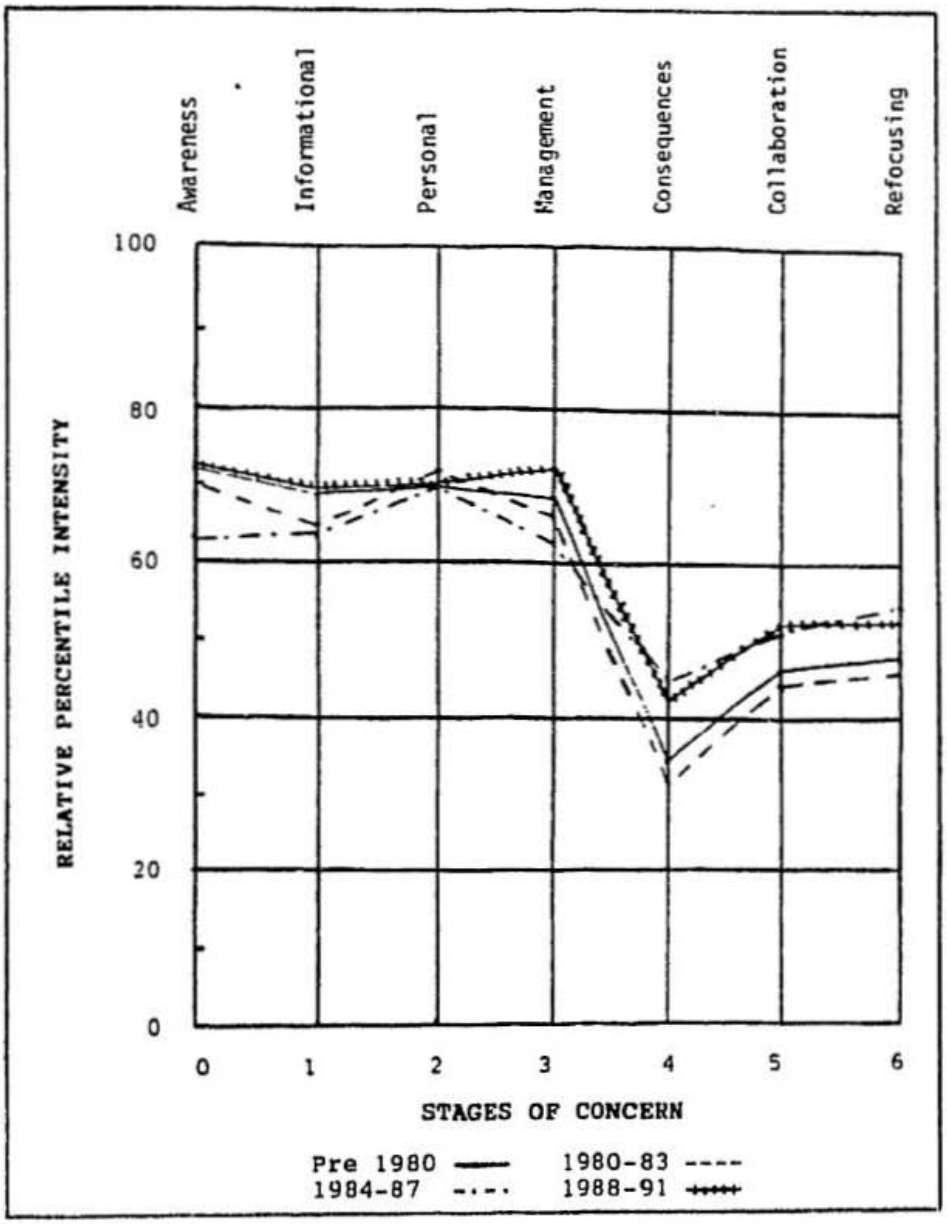

Figure 13

Percentile mean scores of the concerns of teachers, who have recently completed university study in the area of education and those who have not, regarding the implementation of resource-based learning

Table 7

Results of oneway analysis of variance on the intensity of concerns of classroom teachers with various years of teaching experience

Stage	Group	N	Mean	D.F.	F. Ratio	F. Prob.
0	0 - 4	6	6.00	Between Groups	1.2268	.2965
	5 - 9	18	8.50	6		
	10 - 14	16	9.75			
	15 - 19	31	7.35	Within Groups		
	20 - 24	44	7.23	133		
	25 - 29	21	7.95			
	30+	4	3.00			
1	0 - 4	5	20.00	Between Groups	.2572	.9556
	5 - 9	18	18.89	6		
	10 - 14	17	18.24			
	15 - 19	31	19.48	Within Groups		
	20 - 24	43	17.33	133		
	25 - 29	22	18.23			
	30+	4	16.75			
2	0 - 4	6	17.33	Between Groups	.4151	.8680
	5 - 9	19	21.58	6		
	10 - 14	17	19.76			
	15 - 19	30	19.73	Within Groups		
	20 - 24	43	18.16	134		
	25 - 29	22	18.73			
	30+	4	19.00			
3	0 - 4	6	23.67	Between Groups	.9095	.4901
	5 - 9	19	16.74	6		
	10 - 14	17	17.71			
	15 - 19	32	18.63	Within Groups		
	20 - 24	44	17.36	133		
	25 - 29	22	17.82			
	30+	4	17.00			

Table 7 (Continued)

Stage	Group	N	Mean	D.F.	F. Ratio	F. Prob.
4	0 - 4	5	26.80	Between Groups	1.5500	.1668
	5 - 9	19	23.95	6		
	10 - 14	16	21.81			
	15 - 19	32	23.22	Within Groups		
	20 - 24	44	20.98	133		
	25 - 29	21	21.38			
	30+	3	26.33			
5	0 - 4	6	19.67	Between Groups	.3827	.8889
	5 - 9	19	21.37	6		
	10 - 14	16	20.06			
	15 - 19	28	21.36	Within Groups		
	20 - 24	41	19.44	127		
	25 - 29	21	19.71			
	30+	3	21.00			
6	0 - 4	5	16.80	Between Groups	.5588	.7623
	5 - 9	18	17.72	6		
	10 - 14	15	16.47			
	15 - 19	30	16.47	Within Groups		
	20 - 24	40	15.50	126		
	25 - 29	22	16.32			
	30+	3	17.67			

The results of these tests indicate that at the .05 level of significance there were no statistically significant differences, based on years of teaching experience, found in the mean scores at any of the stages. However, the results indicate a practical difference as the profiles (Figure 14) illustrate. The profiles show that teachers with 0-4 years of teaching experience have concerns more intense than those of the other teachers at Stage 3 (Management level). Teachers with 5-9 and 10-14 years of teaching experience have concerns more intense than those of the other teachers at Stage 0 (Awareness level).

Question 8

Are there statistically significant differences between classroom teachers who have the services of a full time learning resource teacher and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Teachers were asked to indicate if they had the services of a full time learning resource teacher in their school. A question on the second part of the questionnaire delineated the classroom teachers into two sub-groups.

The question was answered by using a series of t-tests for independent samples. A separate test was conducted on the sub-group means for the seven Stages of Concern. The

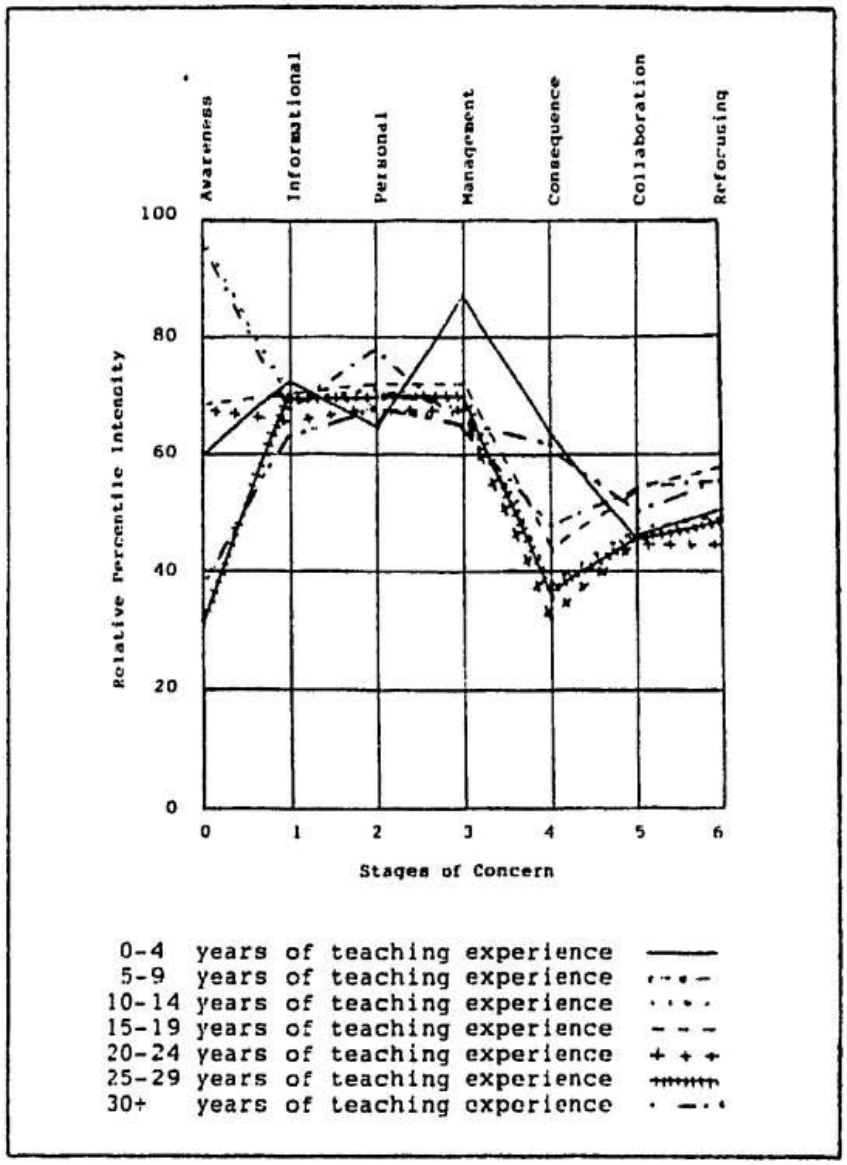

Figure 14

Percentile mean scores of the concerns of teachers with various years of teaching experience regarding the implementation of resource-based learning

results of these tests were judged at the .05 level of significance. The results of these tests are summarized in Table 8.

There was a statistically significant difference in the mean scores on Stage 1 (Informational level) according to the services of a full time learning resource teacher. Teachers who did not have the services of a full time learning resource teacher had statistically significant higher mean Stage 1 scores than the teachers who did have the services of a full time learning resource teacher. While the services of a full time learning resource teacher did not influence the scores on any of the other stages at .05 level of significance, the profiles (Figure 15) point out that teachers without such services have concerns more intense than those of other teachers at Stages 0 through 5 (Awareness level through Collaboration level).

Question 9

Are there significant differences between classroom teachers who work with a principal who has a favourable attitude towards learning resource programs and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

Table 8

Results of t-tests on intensity of concerns of classroom teachers who have the services of a full time learning resource teacher and those who do not

Stage	Group	N	Mean	Std. Dev.	t-value	2-Tail Prob.
0	Yes	98	7.10	4.99	-1.84	.068
	No	40	8.90	5.70		
1	Yes	100	17.19	8.55	-2.25	.026
	No	38	20.76	7.73		
2	Yes	101	18.51	8.56	-1.40	.164
	No	38	20.82	9.01		
3	Yes	102	17.28	6.60	-1.67	.097
	No	40	19.43	7.50		
4	Yes	101	22.14	6.12	-0.53	.594
	No	37	22.76	5.77		
5	Yes	92	19.90	6.40	-1.07	.286
	No	40	21.20	6.36		
6	Yes	94	17.05	6.22	1.14	.258
	No	37	15.62	7.12		

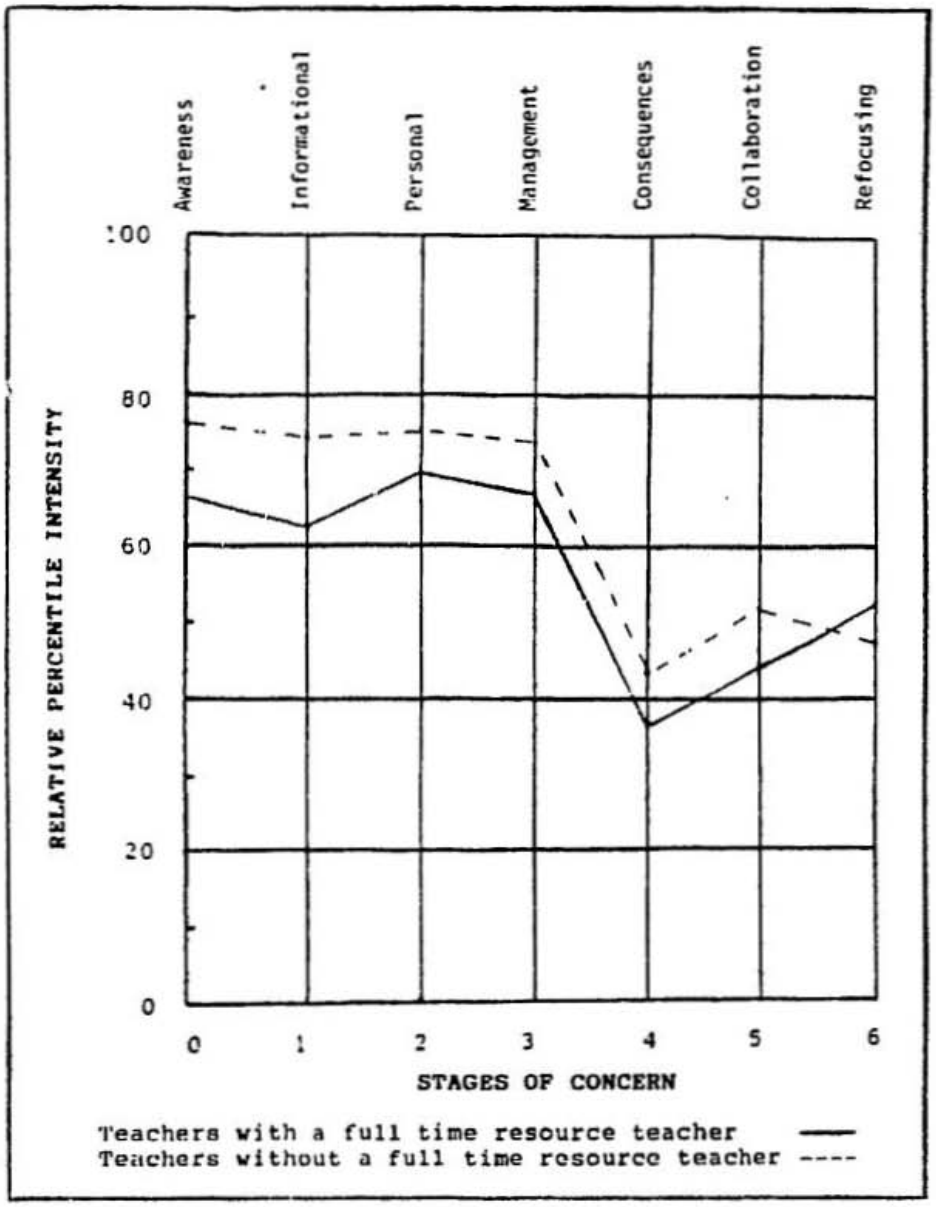

Figure 15

Percentile mean scores of the concerns of teachers, who have the services of a full time resource teacher and those who do not, regarding the implementation of resource-based learning

On the second part of the questionnaire teachers were asked to respond to seven questions which pertained to the attitude of principals toward learning resource programs. These seven questions were given in Chapter III.

A frequency distribution delineated the classroom teachers into these five sub-groups:

(1) classroom teachers whose principal meets all seven criteria items;

(2) classroom teachers whose principal meets six criteria items;

(3) classroom teachers whose principal meets five criteria items;

(4) classroom teachers whose principal meets four criteria items;

(5) classroom teachers whose principal meets three or less criteria items.

The results of this frequency distribution were:

(1) 2.3 per cent of the classroom teachers work with a principal who meets all seven criteria items;

(2) 7.7 per cent of the classroom teachers work with a principal who meets six criteria items;

(3) 13.8 per cent of the classroom teachers work with a principal who meets five criteria items;

(4) 30.0 per cent of the classroom teachers work with a principal who meets four criteria items;

(5) 46.2 per cent of the classroom teachers work with a principal who meets three or less criteria items.

To find the intensity of the concerns of these five sub-groups, a means table was constructed. The results are given in Table 9. The raw mean scores were then converted to percentile scores by using the conversion chart (Appendix D) outlined by Hall et al., (1977) in their scoring manual.

The profiles (Figure 16) illustrate the intensity of these five sub-groups. Teachers who work with a principal who meets three or less criteria items have concerns more intense than those of the other teachers on Stage 1 (Informational level) and Stage 2 (Personal level). Teachers who work with a principal who meets all seven criteria items have concerns less intense than those of all the other teachers at Stage 1 (Informational level), Stage 2 (Personal level), Stage 3 (Management level), Stage 4 (Consequence level) and Stage 6 (Refocusing level).

Question 10

Are there significant differences between classroom teachers who work with a learning resource teacher who has a favourable attitude towards learning resource programs and those who do not in the intensity of concerns in each of the Stages of Concern regarding the implementation of resource-based learning?

On the second part of the questionnaire classroom teachers were asked to respond to eleven questions which pertained to the attitude of learning resource teachers toward learning resource

Table 9

Descriptive statistics for Stages 0 through 6 broken down by rating of principals' attitude towards resource-based learning

Stage	Group	Mean	Std. Dev.
0	3 or less criteria	7.90	5.38
	4	8.35	5.14
	5	6.17	5.11
	6	6.00	6.28
	7	7.00	4.00
1	3 or less criteria	19.63	7.81
	4	18.68	8.95
	5	15.76	8.35
	6	14.40	7.46
	7	12.33	10.12
2	3 or less criteria	21.31	8.56
	4	18.54	8.56
	5	17.24	8.22
	6	16.20	8.93
	7	13.67	7.02
3	3 or less criteria	18.55	6.80
	4	17.94	6.24
	5	17.06	7.49
	6	19.10	8.65
	7	12.00	4.58
4	3 or less criteria	22.73	5.62
	4	22.79	6.42
	5	22.39	7.15
	6	21.50	2.67
	7	20.67	3.06
5	3 or less criteria	19.67	6.54
	4	21.18	5.95
	5	19.76	7.09
	6	21.00	7.47
	7	20.50	.71

Table 9 (Continued)

Stage	Group	Mean	Std. Dev.
6	3 or less criteria	17.87	6.24
	4	15.49	6.30
	5	16.59	7.35
	6	17.67	7.50
	7	14.33	9.02

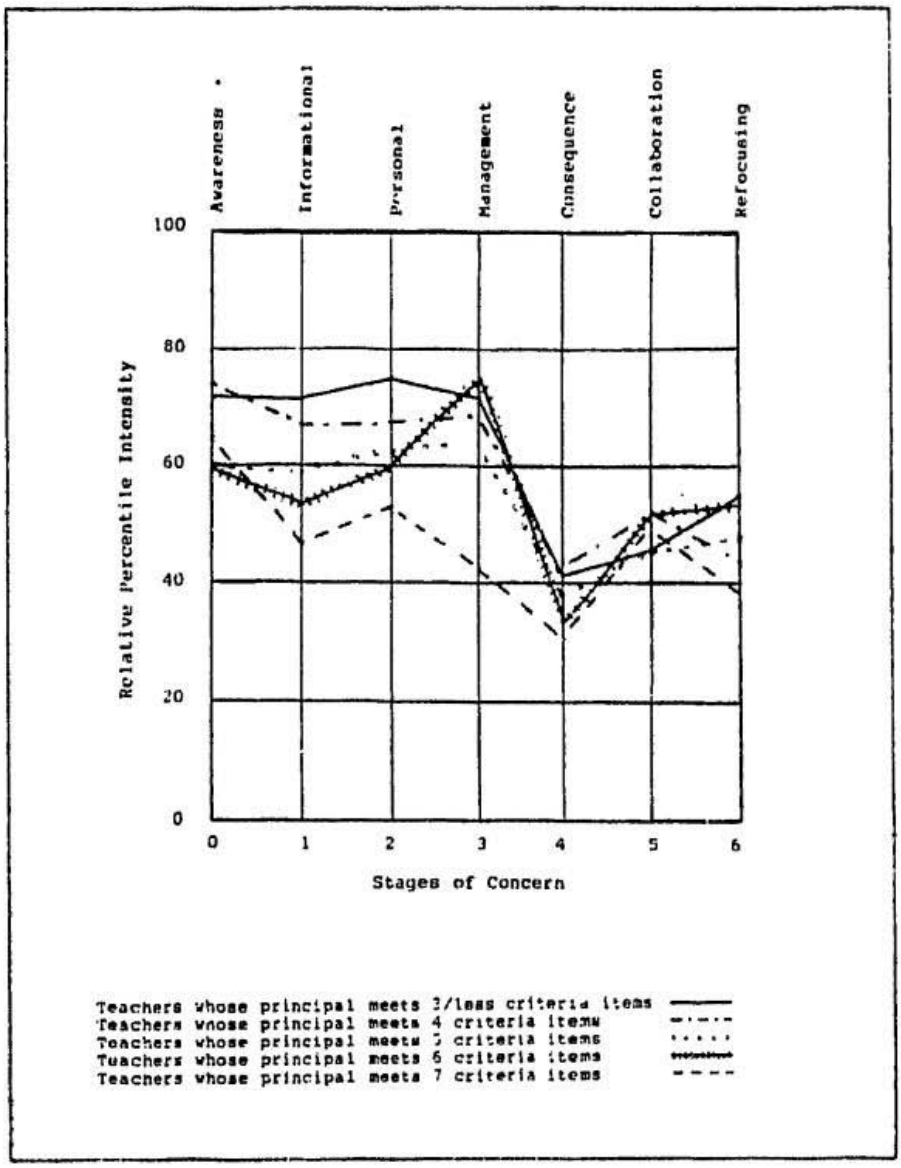

Figure 16

Percentile mean scores of the concerns of teachers who work with a principal who has a favourable attitude (according to certain criteria) towards resource-based learning

programs. These eleven questions were given in Chapter III.

A frequency distribution delineated the teachers into these six sub-groups:

(1) classroom teachers whose learning resource teacher meets all eleven criteria items;

(2) classroom teachers whose learning resource teacher meets ten criteria items;

(3) classroom teachers whose learning resource teacher meets nine criteria items;

(4) classroom teachers whose learning resource teacher meets eight criteria items;

(5) classroom teachers whose learning resource teacher meets seven criteria items;

(6) classroom teachers whose learning resource teacher meets six or less criteria items.

The results of this frequency distribution were:

(1) 3.2 per cent of the classroom teachers work with a learning resource teacher who meets all eleven criteria items;

(2) 8.7 per cent of the classroom teachers work with a learning resource teacher who meets ten criteria items;

(3) 19.0 per cent of the classroom teachers work with a learning resource teacher who meets nine criteria items;

(4) 23.0 per cent of the classroom teachers work with

a learning resource teacher who meets eight criteria items;

(5) 14.3 per cent of the classroom teachers work with a learning resource teacher who meets seven criteria items;

(6) 31.8 per cent of the classroom teachers work with a learning resource teacher who meets six or less criteria items.

To find the intensity of the concerns of these six sub-groups, a means table was constructed. The results are given in Table 10. The raw mean scores were then converted to percentile scores by using the conversion chart (Appendix D) outlined by Hall et al., (1977) in their scoring manual.

The profiles (Figure 17) illustrate the intensity of concerns of these six sub-groups. Teachers who work with a learning resource teacher who meets eight criteria items have intense concerns at State 1 (Informational level) an Stage 2 (Personal level). Teachers who work with a learning resource teacher who meets ten criteria items have intense concerns at Stage 3 (Management level). Teachers who work with a learning resource teacher who meets eleven criteria items have less intense concerns at Stage 1 (Informational level), Stage 2 (Personal level), Stage 3 (Management level), Stage 4 (Consequence level) and Stage 6 (Refocusing level).

Table 10

Descriptive statistics for Stage 0 through 6 broken down by rating of learning resource teachers' attitude towards resource-based learning

Stage	Group	Mean	Std. Dev.
0	6 or less criteria	8.18	5.67
	7	5.72	4.28
	8	8.18	5.08
	9	7.17	5.16
	10	7.45	5.75
	11	4.75	1.71
1	6 or less criteria	19.24	8.09
	7	18.50	7.31
	8	21.64	7.47
	9	17.21	8.40
	10	12.91	6.73
	11	5.50	3.11
2	6 or less criteria	20.16	9.32
	7	18.00	8.54
	8	21.59	8.27
	9	19.61	8.44
	10	18.18	6.94
	11	8.25	3.40
3	6 or less criteria	18.88	6.62
	7	17.83	6.25
	8	17.17	6.67
	9	18.88	7.80
	10	19.64	6.90
	11	10.50	5.32
4	6 or less criteria	22.26	6.83
	7	24.17	5.82
	8	23.21	6.04
	9	22.04	5.50
	10	22.91	3.91
	11	20.67	3.06

Table 10 (Continued)

Stage	Group	Mean	Std. Dev.
5	6 or less criteria	20.21	7.08
	7	19.06	4.80
	8	20.56	5.91
	9	20.48	6.44
	10	20.27	8.80
	11	23.33	7.77
6	6 or less criteria	17.83	7.42
	7	15.35	7.82
	8	16.93	5.13
	9	18.68	5.44
	10	15.64	6.58
	11	10.25	6.08

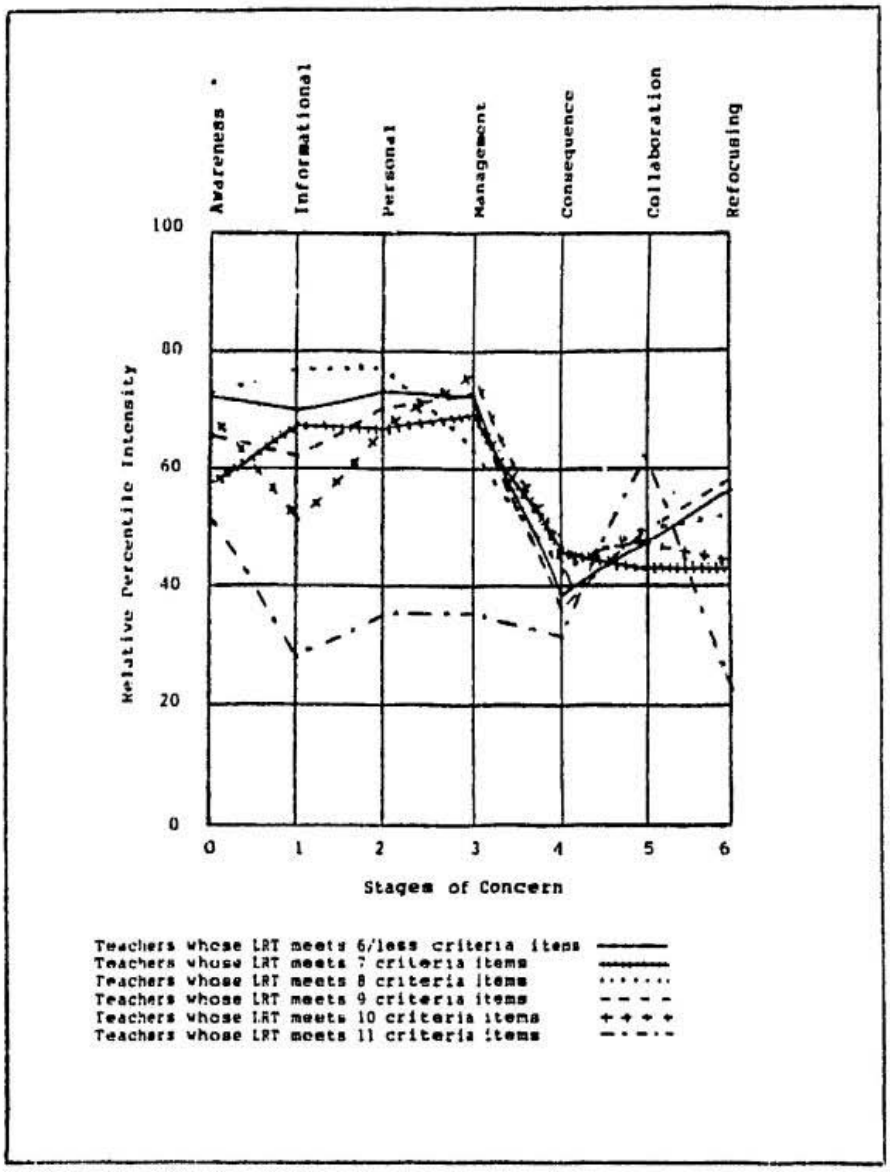

Figure 17

Percentile mean scores of the concerns of teachers who work with a learning resource teacher (LRT) who has a favourable attitude (according to certain criteria) towards resource-based learning

Question 11

Are there significant differences between classroom teachers who have a favourable attitude towards learning resource programs and those who do not in the intensity of concerns in each of the Stages of concern regarding the implementation of resource-based learning?

On the second part of the questionnaire teachers were asked to respond to eight questions which pertained to the attitude of classroom teachers towards learning resource programs. These eight questions were given in Chapter III.

A frequency distribution delineated the classroom teachers into these six sub-groups:

(1) classroom teachers having a favourable attitude according to all eight criteria items;

(2) classroom teachers having a favourable attitude according to seven criteria items;

(3) classroom teachers having a favourable attitude according to six criteria items;

(4) classroom teachers having a favourable attitude according to five criteria items;

(5) classroom teachers having a favourable attitude according to four criteria items;

(6) classroom teachers having a favourable attitude according to three or less criteria items.

The results of this frequency distribution were:

(1) 8.9 per cent of the classroom teachers have a favourable attitude towards resource-based learning according to all eight criteria items;

(2) 13.8 per cent of the classroom teachers have a favourable attitude towards resource-based learning according to seven criteria items;

(3) 21.1 per cent of the classroom teachers have a favourable attitude towards resource-based learning according to six criteria items;

(4) 26.8 per cent of the classroom teachers have a favourable attitude towards resource-based learning according to five criteria items;

(5) 18.7 per cent of the classroom teachers have a favourable attitude towards resource-based learning according to four criteria items;

(6) 10.7 per cent of the classroom teachers have a favourable attitude towards resource-based learning according to three or less criteria items.

To find the intensity of the concerns of these six sub-groups, a means table was constructed. The results are given in Table 11. The raw mean scores were then converted to percentile scores by using the conversion chart (Appendix D) outlined by Hall et al., (1977) in their scoring manual.

The profiles (Figure 18) illustrate the intensity of concerns of these six sub-groups. Teachers who have a

Table 11

Descriptive statistics for Stage 0 through 6 broken down by rating of classroom teachers' attitude towards resource-based learning

Stage	Group	Mean	Std. Dev.
0	3 or less criteria	9.15	5.03
	4	9.87	6.14
	5	7.58	4.73
	6	6.48	4.74
	7	5.65	5.67
	8	6.00	4.07
1	3 or less criteria	18.08	7.93
	4	21.07	6.82
	5	18.75	7.52
	6	18.92	9.60
	7	13.18	7.64
	8	14.36	9.24
2	3 or less criteria	20.31	9.43
	4	23.30	8.18
	5	20.94	8.08
	6	18.13	8.90
	7	15.94	8.20
	8	16.73	8.68
3	3 or less criteria	19.23	8.69
	4	21.39	5.00
	5	18.97	6.07
	6	16.96	6.79
	7	15.71	8.78
	8	17.06	7.17
4	3 or less criteria	19.00	5.26
	4	24.32	5.15
	5	23.18	6.04
	6	23.92	6.53
	7	19.75	5.18
	8	22.91	5.05

Table 11 (Continued)

Stage	Group	Mean	Std. Dev.
5	3 or less criteria	15.83	5.98
	4	21.73	7.03
	5	19.65	5.52
	6	21.67	6.74
	7	19.71	7.74
	8	24.70	3.86
6	3 or less criteria	18.00	4.36
	4	18.00	7.90
	5	16.73	5.97
	6	17.32	6.96
	7	14.12	6.61
	8	19.20	6.63

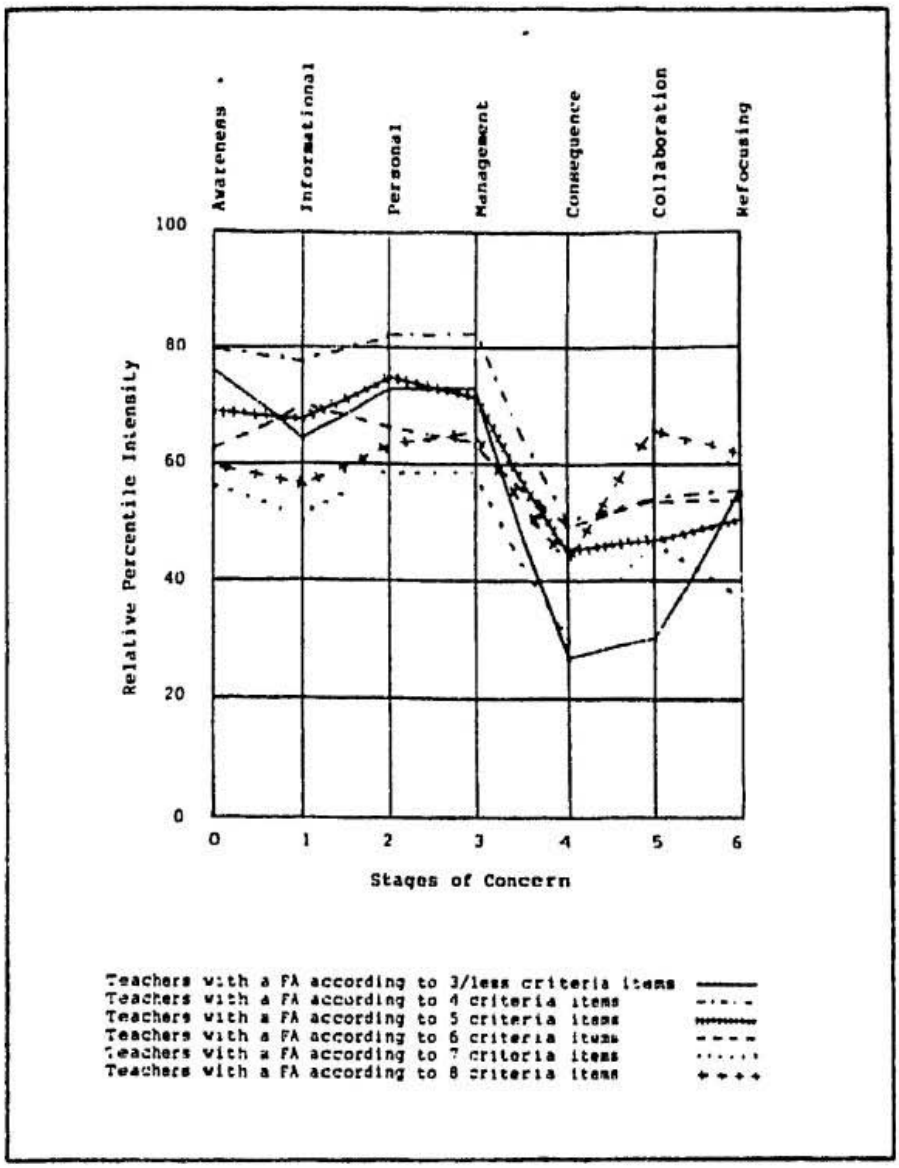

Figure 18

Percentile mean scores of the concerns of teachers who have a favourable attitude (FA) (according to certain criteria) towards resource-based learning

favourable attitude towards resource-based learning according to four criteria items have intense concerns on Stages 0 through 4 (Awareness level through Management level). Teachers who have a favourable attitude towards resource-based learning according to eight criteria items have intense concerns on Stage 5 (Collaboration level).

Summary

This chapter has presented the results of the study on a question-by-question basis. Implications and conclusions drawn from these results will be discussed in the next chapter together with some recommendations for further study and direction for staff development for the implementation of resource-based.

Chapter V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

In planning for staff development, it is important to determine classroom teachers' attitudes and reactions to the proposed innovation. This study attempted to determine the reactions and attitudes of the elementary teachers of the Roman Catholic School Board for St John's by assessing their levels of concerns. The assessment of the intensity of their concerns was done shortly after an implementation effort by this school board. To determine if differential plans are necessary for staff development with various groups, the study also sought to find factors that may have influenced these concerns.

This study attempted to determine if differences existed between various sub-groups. The sub-groups were stratified on the basis of gender, age, size of student population, academic qualifications, date of university study, teaching experience, services of a full time learning resource teacher, attitude of the principal towards learning resource programs, attitude of the learning resource teacher towards learning resource programs and attitude of the classroom teachers towards learning resource programs.

The Study

The population studied for this investigation was the elementary (grades 4-8) classroom teachers of the Roman Catholic School Board for St. John's for the school year 1991-92. The sample consisted of 277 regular classroom teachers and their concerns about the implementation of resource-based learning. The sample was stratified into several different sub-groups for the purpose of data analysis.

This study was conducted using a survey questionnaire (Appendix A). The questionnaire used was a modified version of the Stages of Concern Questionnaire which had previously been validated and checked for reliability. The slight modifications were not expected to affect the reliability and validity of the instrument.

During the winter of 1992, the questionnaires were distributed to the principals of the thirty schools involved. Each regular classroom teacher received a questionnaire to complete within a one week period. Upon receipt of the completed questionnaires, the principals were to return them to the investigator.

In addition to collecting data related to the concerns of classroom teachers, certain other data were collected. Information was obtained related to the teachers' gender, age, student population, academic qualifications, time of

recently completed university study in the area of education and teaching experience. Information was also sought on the availability of the services of a full time learning resource teacher. Teachers were asked to indicate whether they worked with a principal and a learning resource teacher who had favourable attitudes towards learning resource programs. Information was also sought concerning the attitude of the classroom teachers themselves towards learning resource programs.

The information collected on teacher concerns, together with the information collected on the other questions, provided the data for analysis. A discussion of the results of this study follows in the next section.

Discussion of the Results

The results of this study were presented on a question-by-question basis in Chapter IV. This section will provide a discussion of these results. Prior to that, the impact of the response rate on generalizability will be discussed together with possible explanations for the response received.

Response Rate

Of the total of 277 regular classroom teachers sampled only 145 responded, resulting in a response rate of 52.3

percent. This response was lower than expected. Any discussion of the results of this study must be done being fully cognizant of this rate.

Several probable reasons can be surmised to try to explain this low response. The research method employed, the mailed survey questionnaire, has a history of low response rates (Dillman, 1978) but was used despite this inherent problem because of the advantages discussed in Chapter III. Since the majority of these teachers work in the St. John's area, they become the target of many surveys and as a result they are "turned off" to questionnaires in general. Today, teaching involves a great deal of paper work and some teachers just do not have the time to complete questionnaires. In many cases, questionnaires and such things are delivered to teachers' mail boxes and not to the teachers themselves. Some teachers have a habit of just leaving things in their mail boxes.

Due to the low response rate, inferences will be valid only for those who responded. Projections of these results to the teaching population of the St. John's Roman Catholic School Board and province as a whole must take into account the low response rate and its implications for generalizability. In spite of this caveat, certain new hypotheses can be generated that could be studied in the future.

Discussion

This study found that the vast majority (83.5 percent) of classroom teachers responding had the highest intensity of concerns on one of the first four stages. These four stages - Awareness, Informational, Personal and Management - are associated with concern about self in relation to the innovation. Persons having these concerns as most intense are typical nonusers or beginning users of the innovation (Hall et al., 1977).

The profile for this group of teachers showed that the mean percentile scores for this group are highest on the first four stages varying from 70 to 67 points. The other three stages showed a lower intensity of concern ranging from 51 points on Refocusing concerns to 40 points on Consequence concerns.

The arousal of high self-oriented concerns can be attributed to many factors. Classroom teachers may have become aware of the potential of this innovation through in-service programs, university courses related to learning resources, journals and magazines.

The low intensity on task and impact concerns is most likely due to the limited use or nonuse of this innovation by the majority of classroom teachers. Hall et al., (1977) indicated that with increased use of the innovation, these concerns become aroused and more intense. The existence of a one-to-one relationship between level of use and the level

of concern has been postulated (Loucks & Hall, 1977) and appears to be reflected in these results.

These results have implications for the design of staff development activities for those who responded and as well as all teachers of the province if an implementation effort in resource-based learning were to be undertaken. If one could assume that the majority of nonrespondents had very little or no experience with resource-based learning, they would most likely have their most intense concerns on the Awareness, Informational, Personal and Management Stages. This hypothesis could be tested by administering the Stages of Concern Questionnaire to teachers attending in-service programs to confirm that their highest concerns exist at one of these four stages.

The high intensity of arousal of self-oriented concerns requires resolution prior to the intensity of concerns at the task and impact stages increasing. This can be accomplished through provision of staff development targeted at the resolving of these concerns about resource-based learning.

At the Awareness Stage classroom teachers are not excessively concerned about resource-based learning or involved with it. Staff development should include information that will make classroom teachers more aware of resource-based learning and its potential for preparing today's students for an information-rich society.

On the Informational Stage classroom teachers have a

general awareness of resource-based learning but are seeking more information about it. To resolve these concerns, classroom teachers should be provided with general information about resource-based learning, what it is, how it works, advantages of this innovation, what will be required to implement it and what are its long term effects. At this point, teachers should be provided with some experience in using this innovation. This should consist of one resource-based unit per term. It is most important that success be achieved on the first encounter with this innovation. Principals must ensure that preparation periods are slotted in each classroom teacher's schedule. The learning resource teacher must patiently see what ideas the classroom teacher has for this particular unit and then carefully offer his/her ideas so that together they can plan a learning experience for each student. Classroom teachers should be made aware that to successfully use this innovation, an elaborate background in learning resources is not necessary.

At the Personal Stage classroom teachers are concerned about the demands that this innovation will place on them and how well they can cope with these new demands. Classroom teachers should be reassured that this new approach can better prepare students for today's information-rich society. They should be reminded that the information world is one of constant change. They should be reminded that it is more important for today's students to understand the factors that

contribute to a particular situation, rather than memorizing descriptive information. Classroom teachers must understand that today's students need to know what information is available, how to locate it and most importantly, how to use it effectively.

Staff development programs should concentrate on these four Stages of Concern together since they are self-oriented and high in intensity. It is important that no attempt be made to resolve the concerns at the task and impact stages since they are not intense at this time. Attempts to do so may unduly arouse these concerns prior to the resolution of the self-oriented concerns (Anderson, 1983). As the self-oriented concerns are resolved, the task and impact concerns will become more intense and then can be resolved through further staff development targeted at those concerns. At this time classroom teachers must feel comfortable with the innovation before they make it a part of their repertoire.

Administration of the SOC Questionnaire at individual schools could pinpoint the classroom teachers whose highest concerns are at the task and impact stages. Appropriate in-service programs should be provided to help these teachers resolve their concerns. It is of the uppermost importance that staff development programs address the Stages of Concern that are of the highest intensity for the classroom teachers involved.

This study also attempted to determine if different

groups of teachers had different concerns.

Gender appears to be of minimum significance in this study. The difference ranged from 2 to 4 points of intensity with both groups indicating that their personal concerns override concerns about learning more about the innovation. It appears then that males and females do not need different types of in-service programs. Both groups need programs aimed at the resolution of self-oriented concerns. The tailing-up of Stage 6 indicates that there could be some resistance to the innovation on the part of female respondents. However, with the resolution of the self-oriented concerns, this could change as a result of the arousal of higher order concerns. As a result, the intensity of concerns should be assessed regularly - perhaps yearly - so that staff development programs can address the Stages of Concern that have the highest intensity.

Although age did not result in any statistically significant differences in the intensity of concerns for the classroom teachers in this study, the profiles indicate that some practical differences do exist. For example, there is a difference of 27 points of intensity between the youngest and the oldest classroom teachers on the Informational Stage and the Personal Stage. According to these profiles three types of staff development programs are needed - one for the youngest, one for the oldest and one for the other age groups. This is confirmed by the severe tailing-up of Stage

6 for the oldest age group. This group is loudly announcing that they have their own ideas about the innovation. Regular assessment of intensity of concerns will be of great importance. Perhaps it could be done at the beginning of the school year at a staff meeting so that there would be a 100 percent response rate.

The size of the student population did not result in any statistically significant differences in the intensity of concerns. The profiles indicate slight differences on Stage 0, 1 and 2. This means that the same staff development activities could be used for classroom teachers in all sizes of student populations. On Stage 3 classroom teachers working with the two smaller student populations indicated concerns of high intensity. A more in-depth study is needed here to see if the services of full time learning resource teachers are available to those classroom teachers. The absence of these services could explain the high concerns about managerial problems. The absence of these services could also explain the resistance indicated by the severe tailing-up of Stage 6 for the classroom teachers working with a student population of 100-199.

Academic qualifications did result in statistically significant differences in intensity of concerns as indicated by the profiles. At least three different types of in-service programs are needed since the intensity of concerns vary so much on Stages 0, 1, 2 and 3. The differences that

exist on Stages 4, 5 and 6, the task and impact levels, could change with the resolutions of the self-oriented concerns.

Recently completed university study in the area of education did not result in statistically significant differences in the intensity of concerns. As indicated in the profiles the same staff development program can be used for all classroom teachers since their concerns are of similar intensity on all stages.

Years of teaching experience did not result in statistically significant differences in the intensity of concerns. The profiles indicate that three types of initial staff development activities are needed for these classroom teachers since there is a difference of 61 points of intensity. However, as program developers address the Personal and Management concerns two types of activities would be sufficient - one for the less experienced and one for the more experienced.

The services of a full time learning resource teacher did result in statistically significant differences in the intensity of concerns but only at Stage 1 (Informational level). The profiles indicate that a difference of 11 points of intensity on the Awareness Stage and 12 on the Informational Stage. As a result two types of in-service are needed for these classroom teachers.

The attitude of the principal towards learning resource programs resulted in differences of 20-30 points of intensity

on Stages 1, 2, and 3. At least two types of staff development activities are needed for these classroom teachers. The profiles indicate the importance of the principal's attitude towards learning resource programs at the Informational Stage and the Personal Stage. The more favourable the principal's attitude is towards learning resource programs, the lower the intensity of the classroom teachers' concerns.

The attitude of the learning resource teacher towards learning resource programs resulted in differences of 22-48 points of intensity on the self-oriented stages. Several types of in-service programs are needed for these classroom teachers. The number of activities could be reduced as concerns are resolved. The profiles indicate that the classroom teachers working with the learning resource teacher with the most favourable attitude towards learning resource programs have resolved their self-oriented concerns and have now reached the task and impact levels.

The attitude of classroom teachers towards learning resource programs resulted in differences of 22-27 points of intensity. The profiles confirm some important facts about resource-based learning. Classroom teachers with favourable attitudes towards learning resource programs have concerns lower in intensity. If resource-based learning is going to be adopted into the educational system, then staff developers must pay close attention to the attitude of classroom

teachers toward this innovation.

An overall view of the study indicates that several types of staff development activities are needed in order to resolve self-oriented concerns. Regular assessment of those concerns is very important to their resolution. This assessment should take place at the beginning of the school year at the first staff meeting to ensure a 100 percent response rate. Initial staff development activities should address the attitude of classroom teachers toward learning resource programs.

The results of this study, though tainted by an inadequate response rate, have implications for the implementation of resource-based learning in Newfoundland schools.

Implications

The discussion of the results in the previous section outlined potential approaches to providing staff development for classroom teachers in an attempt to implement resource-based learning. These suggestions were based on the concern levels expressed by classroom teachers in this study.

The review of the literature indicates that a need exists to provide classroom teachers with staff development dealing with resource-based learning. This study has assessed the concerns of the classroom teachers of a large

city school board about this innovation. If staff development in this area becomes a reality, it will be necessary to complete a more comprehensive assessment of the concerns of classroom teachers since concerns do change over time and with the acquisition of more knowledge.

The development of a comprehensive in-service program must be a part of a well planned resource-based learning policy. A developmental plan will bring about the implementation of this new innovation as part of a long term gradual effort. Implementation does not result from the decision to adopt an innovation. Implementation and continuation come about when planning and action form an important component of the long term plan.

The main aim of this resource-based learning policy should be to prepare students for the world of tomorrow. This would necessitate the preparation of classroom teachers already in the field to use this innovation. Staff developers must aim at changing the attitude of classroom teachers toward resource-based learning. In-service activities should start at the beginning of the school year and continue at regular intervals throughout the school year to ensure that classroom teachers continue to use it.

The concerns of the elementary classroom teachers of the Roman Catholic School Board for St. John's were examined in this study and the results have raised several questions that could be dealt with in future research. These questions are:

(1) Are there significant differences between the concerns of primary, elementary, junior high and senior high teachers and if so, what are probable causes for these differences?

(2) How do the concerns of classroom teachers employed with other school boards compare with those found in this study?

(3) How do the concerns of classroom teachers regarding other innovations compare with those found in this study?

(4) Do teacher concerns regarding resource-based learning change over time and if so, what factors influence the resolution of old concerns and the arousal of new concerns?

(5) Do the attitudes of classroom teachers regarding innovations change over time and if so, what factors influence these changes?

(6) How do the attitudes of classroom teachers regarding resource-based learning compare with those of their principal?

(7) What will be the concerns of the elementary classroom teachers of the Roman Catholic School Board for St. John's in 1997 regarding the implementation of resource-based learning?

The formulation of a well planned staff development program and its inclusion in the resource-based learning policy is a necessity for the successful implementation of this new innovation in the schools. Regular assessment of the concerns of classroom teachers and additional research are needed to provide staff developers with the information needed to plan appropriate in-service activities. The investigation of the questions posed above will provide some of the information.

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APPENDIX A

P.O. Box 203
Kelligrews, Nf.
AOA-2TO

Dear Teacher,

I am a graduate student in the Curriculum and Instruction Division of the Faculty of Education at Memorial University. I am presently writing my thesis and would appreciate it if you could take a few minutes from you busy schedule to provide some of the data required to complete this task.

The purpose of this study is to determine what concerns the elementary teachers of the Roman Catholic School Board for St. John's have regarding their present or future use of resource-based learning as a teaching strategy in today's schools. This study is attempting to ascertain how teachers feel at the present time.

The attached questionnaire is divided into two parts. The first asks you to express your concern on thirty-five items related to the introduction and use of resource-based learning as a teaching strategy in today's schools. The second part requests you to provide some demographic and implementation data which will be used to determine if certain factors influence these concerns.

It would be greatly appreciated if you could complete the questionnaire individually, within a one week period and then return it sealed in the envelope provided to your principal.

Thank you for your cooperation and time in providing this information.

Yours truly,

Doreen Dwyer

A Survey of Concerns of Resource-based Learning *

The purpose of this questionnaire is to determine the concerns of teachers about the use of Resource-based Learning as a teaching strategy. The items were developed from typical responses of school and college teachers whose knowledge about various innovations ranged from no knowledge at all to many years experience in using them. Therefore, some of the items may appear to be of little or no relevance to you at this time. For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees, and should be marked higher on the scale, according to the explanation at the top of each page.

For example:

This statement is very true of me at this time.	0	1	2	3	4	5	6	7
This statement is somewhat true of me now.	0	1	2	3	4	5	6	7
This statement is not at all true of me at this time.	0	1	2	3	4	5	6	7
This statement seems irrelevant to me.	0	1	2	3	4	5	6	7

Please respond to the items in terms of your present concerns, or how you feel about your use or potential use of

Resource-based Learning as a teaching strategy. There is no universally accepted definition of this innovation, so please think of it in terms of your own perception of what it involves. Phrases such as "the innovation", "the program", "this approach", and "the new system" all refer to Resource-based Learning. Remember to respond to each item in terms of your present concerns about your use or potential use of Resource-based Learning as a teaching strategy.

Thank you for taking the time to complete this questionnaire.

---

* Adapted from the work of the R & D Centre for Teacher Education, University of Texas in Austin.

SOC Questionnaire Items

Irrelevant 0
Not true of me now 1 2 3 4 5 6 7 Very true of me now

1.	I am concerned about students' attitudes toward resource-based learning.	0	1	2	3	4	5	6	7
2.	I now know of some other approaches that might work better.	0	1	2	3	4	5	6	7
3.	I don't even know what resource-based learning is.	0	1	2	3	4	5	6	7
4.	I am concerned about not having enough time to organize myself each day.	0	1	2	3	4	5	6	7
5.	I would like to help other faculty in their use of resource-based learning.	0	1	2	3	4	5	6	7
6.	I have a very limited knowledge about resource-based learning.	0	1	2	3	4	5	6	7
7.	I would like to know about the effect of re-organization on my professional status.	0	1	2	3	4	5	6	7
8.	I am concerned about conflict between my interests and my responsibilities.	0	1	2	3	4	5	6	7
9.	I am concerned about revising my use of resource-based learning.	0	1	2	3	4	5	6	7
10.	I would like to develop working relationships with both our faculty and outside faculty using resource-based learning.	0	1	2	3	4	5	6	7
11.	I am concerned about how resource-based learning affects students.	0	1	2	3	4	5	6	7
12.	I am not concerned about resource-based learning.	0	1	2	3	4	5	6	7

Irrelevant 0
Not true of me now 1 2 3 4 5 6 7 Very true of me now

13.	I would like to know who will make the decisions in the new system.	0	1	2	3	4	5	6	7
14.	I would like to discuss the possibility of using resource-based learning.	0	1	2	3	4	5	6	7
15.	I would like to know what resources are available if we decide to adopt resource-based learning.	0	1	2	3	4	5	6	7
16.	I am concerned about my inability to manage all that resource-based learning requires.	0	1	2	3	4	5	6	7
17.	I would like to know how my teaching or administration is supposed to change.	0	1	2	3	4	5	6	7
18.	I would like to familiarize other departments or persons with the progress of this new approach.	0	1	2	3	4	5	6	7
19.	I am concerned about evaluating my impact on students.	0	1	2	3	4	5	6	7
20.	I would like to revise the instructional approach of resource-based learning.	0	1	2	3	4	5	6	7
21.	I am completely occupied with other things.	0	1	2	3	4	5	6	7
22.	I would like to modify our use of resource-based learning based on the experiences of our students.	0	1	2	3	4	5	6	7
23.	Although I don't know about resource-based learning, I am concerned about things in the area.	0	1	2	3	4	5	6	7

Irrelevant 0
Not true of me now 1 2 3 4 5 6 7 Very true of me now

24.	I would like to excite my students about their part in this approach.	0	1	2	3	4	5	6	7
25.	I am concerned about time spent working with non-academic problems related to resource-based learning.	0	1	2	3	4	5	6	7
26.	I would like to know what the use of resource-based learning will require in the immediate future.	0	1	2	3	4	5	6	7
27.	I would like to co-ordinate my effort with others to maximize the effects of resource-based learning.	0	1	2	3	4	5	6	7
28.	I would like to have more information on time and energy commitments required by resource-based learning.	0	1	2	3	4	5	6	7
29.	I would like to know what other faculty are doing in this area.	0	1	2	3	4	5	6	7
30.	At this time, I am not interested in learning about resource-based learning.	0	1	2	3	4	5	6	7
31.	I would like to determine how to supplement, enhance or replace resouce-based learning.	0	1	2	3	4	5	6	7
32.	I would like to use feedback from students to change the program.	0	1	2	3	4	5	6	7
33.	I would like to know how my role will change when I am using resource-based learning.	0	1	2	3	4	5	6	7
34.	Co-ordination of tasks and people is taking too much of my time.	0	1	2	3	4	5	6	7

Irrelevant 0
Not true of me now 1 2 3 4 5 6 7 Very true of me now

35.	I would like to know how resource-based learning is better than what we have now.	0 1 2 3 4 5 6 7

Demographic and Implementation Data

Place the letter of the response which corresponds to your choice in the space to the right.

1. What is your gender? ____
   (a) male (b) female

2. What is your age? ____
   (a) 0-29 (b) 30-39 (c) 40-49 (d) 50+

3. Which grade do you teach the majority of the time? ____
   (a) four (b) five (c) six (d) seven (e) eight

4. What is the student population of the school in which you teach? ____
   (a) 100-199 (b) 200-299 (c) 300-399
   (d) 400-499 (e) 500+

5. What is the highest degree you have obtained? ____
   (a) no degree (b) bachelors (c) masters
   (d) doctorate

6. When did you last attend university to do an education course? ____
   (a) pre 1980 (b) 1980-83 (c) 1984-87
   (d) 1988-91

7. How many years have you been teaching? ____
   (a) 0-4 (b) 5-9 (c) 10-14 (d) 15-19
   (e) 20-24 (f) 25-29 (g) 30+

8. How many years have you been using resource-based learning as a teaching strategy? ____
   (a) 0 (b) 1 (c) 2 (d) 3
   (e) 4 (f) 4 (g) 6+

9. Have you received training in the use of learning resources? (Workshops, university courses, etc.) ____
   (a) yes (b) no

10. (Answer if your response to #9 was "yes". If your response to #9 was "no", go to question #11.)

    In what type of course did you receive your training in learning resources? ____
    (a) university graduate course
    (b) university undergraduate course
    (c) school board workshop
    (d) other (please specify) _____

11. Is there a full time learning resource teacher in your school? ____
(a) yes (b) no

12. Is the learning resource center in your school used as a classroom? ____
(a) yes (b) no

13. Does your class have a regular scheduled period in the learning resource center? ____
(a) yes (b) no

14. Do you stay with your students when they are working in the learning resource center? ____
(a) yes (b) no

15. If the need arises, can you send an individual or a small group to the learning resource center to do immediate research? ____
(a) yes (b) no

16. Do you meet individually with the learning resource teacher to co-operatively plan units for your class? ____
(a) yes (b) no

17. When planning a unit of work with the learning resource teacher, do you refer to the school's learning skills plan to determine which skills should be introduced or reinforced during this unit? ____
(a) yes (b) no

18. When planning a unit of work with the learning resource teacher, do you revise and adapt units from previous years rather than always starting from scratch? ____
(a) yes (b) no

19. Do you attend in-service programs that are conducted by the learning resource teacher in your school? ____
(a) yes (b) no

20. Are you comfortable in using the various pieces of equipment in the learning resource center? ____
(a) yes (b) no

21. Would you like to have more in-service programs (individually or in small groups) to help you deal effectively with new technology? ____
(a) yes (b) no

22. Do you help the learning resource teacher to select new materials for the learning resource center? ____
(a) yes (b) no

23. Do your students have any difficulty obtaining and returning recreational reading materials? ____
(a) yes (b) no

24. Does the learning resource teacher ask you to take care of the overdue notices during homeroom period or during class? ____
(a) yes (b) no

25. Does the learning resource teacher visit your classroom to observe students working on resource-based units? ____
(a) yes (b) no

26. Do you invite the learning resource teacher to visit your classroom while students are working on resource-based units? ____
(a) yes (b) no

27. Does the principal visit your classroom to observe students working on resource-based units? ____
(a) yes (b) no

28. Do you invite the principal to visit your classroom while students are working on resource-based units? ____
(a) yes (b) no

29. Does the learning resource teacher send you memos or inform you in some way of the arrival of new materials? ____
(a) yes (b) no

30. Does your schedule allow preparation time to meet with the learning resource teacher? ____
(a) yes (b) no

31. Does the learning resource teacher seek information from you concerning courses or methods? ____
(a) yes (b) no

32. Are there adult volunteers available in the learning resource center to assist you and your students? ____
(a) yes (b) no

33. Are you a member of a library advisory committee, a friends group on service for young people, or a resource-based learning committee? ____
(a) yes (b) no

34. Are you familiar with the learning resource center? ____
(a) yes (b) no

35. Do you as a teacher have a clear understanding of the role of the learning resource teacher and the function of the learning resource center? ____
(a) yes (b) no

APPENDIX B

P.O. Box 203
Kelligrews, Nf.
AOA-2T0

Dear Principal,

I am a graduate student in the Curriculum and Instruction Division of the Faculty of Education at Memorial University. This letter is written to solicit your support with the collection of some of the data required for my master's thesis.

The purpose of this study is to determine what concerns the elementary teachers of the Roman Catholic School Board for St. John's have regarding their present or future use of resource-based learning as a teaching strategy in today's schools. This study is designed to determine the concerns or feelings of classroom teachers about this innovation.

I have been granted permission by Ms. Geraldine Roe, the Associate Superintendent of the Curriculum and Instruction Division to do this study. Within a week you will receive the questionnaires for distribution to all classroom teachers in grades four to eight. Please ask them to complete the questionnaires within a week and return them to you sealed in the envelopes provided.

Thank you in advance for your time in assisting me with this study.

Yours truly,

Doreen Dwyer

P.O. Box 203
Kelligrews, Nf.
AOA-2TO

Dear Principal,

Last week a letter was forwarded to you to solicit your support with the collection of some of the data required for my master's thesis.

Enclosed are the questionnaires for distribution to all classroom teachers in grades four to eight. Please ask them to complete the questionnaires within a week and return them to you sealed in the envelopes provided.

It would be greatly appreciated if you could forward the completed questionnaires to me in the enclosed self-addressed pre-stamped envelope at your earliest convenience.

Thank you for assisting me with this study.

Yours truly,

Doreen Dwyer

APPENDIX C

Concerns Statements by Stage of Concern

Item Number	Statement
	Stage 0
3	I don't even know what resource-based learning is.
12	I am not concerned about resource-based learning.
21	I am completely occupied with other things.
23	Although I don't know about resource-based learning, I am concerned about things in the area.
30	At this time, I am not interested in learning about resource-based learning.
	Stage 1
6	I have a very limited knowledge about resource-based learning.
14	I would like to discuss the possibility of using resource-based learning.
15	I would like to know what resources are available if we decide to adopt resource-based learning.
26	I would like to know what the use of resource-based learning will require in the immediate future.
35	I would like to know how resource-based learning is better than what we have now.
	Stage 2
7	I would like to know about the effects of reorganization on my professional status.
13	I would like to know who will make the decisions in the new system.

17 I would like to know how my teaching or administration is supposed to change.

28 I would like to have more information on time and energy commitments required by resource-based learning.

33 I would like to know how my role will change when I am using resource-based learning.

Stage 3

4 I am concerned about not having enough time to organize myself each day.

8 I am concerned about conflict between my interests and my responsibilities.

16 I am concerned about my inability to manage all that resource-based learning requires.

25 I am concerned about the time spent working with nonacademic problems related to resource-based learning.

34 Coordination of tasks and people is taking too much of my time.

Stage 4

1 I am concerned about students' attitudes towards resource-based learning.

11 I am concerned about how resource-based learning affects students.

19 I am concerned about evaluating my impact on students.

24 I would like to excite my students about their part in this approach.

32 I would like to use feedback from students to change the program.

Stage 5

5 I would like to help other faculty in their use of resource-based learning.

10 I would like to develop working relationships with both our faculty and outside faculty using resource-based learning.

18 I would like to familiarize other departments or persons with the progress of this new approach.

27 I would like to coordinate my effort with others to maximize the effects of resource-based learning.

29 I would like to know what other faculty are doing in this area.

Stage 6

2 I now know of some other approaches that might work better.

9 I am concerned about revising my use of resource-based learning.

20 I would like to revise the instructional approach to resource-based learning.

22 I would like to modify our use of resource-based learning based on the experiences of our students.

31 I would like to determine how to supplement, enhance, or replace resource-based learning.

APPENDIX D

Raw Score to Percentile Conversion Chart

Five Item Raw Scale Score	Total	Percentiles for Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
0		10	5	5	2	1	1	1
1		23	12	12	5	1	2	2
2		29	16	14	7	1	3	3
3		37	19	17	9	2	3	5
4		46	23	21	11	2	4	6
5		53	27	25	15	3	5	9
6		60	30	28	18	3	7	11
7		66	34	31	23	4	9	14
8		72	37	35	27	5	10	17
9		17	40	39	30	5	12	20
10		81	43	41	34	7	14	22
11		84	45	45	39	8	16	26
12		86	48	48	43	9	19	30
13		89	51	52	47	11	22	34
14		91	54	55	52	13	25	38
15		93	57	57	56	16	28	42
16		94	60	59	60	19	31	47
17		95	63	63	65	21	36	52
18		96	66	67	69	24	40	57
19		97	69	70	73	27	44	60
20		98	72	72	77	30	48	65
21		99	75	76	80	33	52	69
22		99	80	78	83	38	55	73
23		99	84	80	85	43	59	77
24		99	88	83	88	48	64	81
25		99	90	85	90	54	68	84
26		99	91	87	92	59	72	87
27		99	93	89	94	63	76	90
28		99	95	91	95	66	80	92
29		99	96	92	97	71	84	94
30		99	97	94	97	76	88	96
31		99	98	95	98	82	91	97
32		99	99	96	98	86	93	98
33		99	99	96	99	90	95	99
34		99	99	97	99	92	97	99
35		99	99	99	99	96	99	99